



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

February 17, 2016

Mr. Glenn Mathues, Licensing Engineer
AREVA TN
7135 Minstrel Way, Suite 300
Columbia, MD 21045

SUBJECT: SECOND REQUEST FOR ADDITIONAL INFORMATION – APPLICATION FOR
AMENDMENT NO. 14 TO THE STANDARDIZED NUHOMS® SYSTEM

Dear Mr. Mathues:

By letter dated April 16, 2015, AREVA, Inc. (AREVA) submitted an application to amend Certificate of Compliance (CoC) No. 1004 for the Standardized NUHOMS® System. On August 31, 2015, NRC staff issued its first request for additional information (RAI). On November 11, 2015, AREVA submitted its responses to this first RAI.

The staff has determined that further information is needed to complete its technical review. The second RAI is in the enclosure. Your response should be provided by March 14, 2016. If you are unable to meet this deadline, please notify us in writing, at least one week in advance, of your new submittal date and the reasons for the delay. The staff will then assess the impact of the new submittal date and notify you of a revised schedule.

Please reference Docket No. 72-1004 and TAC No. L25011 in future correspondence related to this request. If you have any questions regarding this matter, I may be contacted at (301) 415-0606.

Sincerely,

/RA/

Jose R. Cuadrado, Project Manager
Spent Fuel Licensing Branch
Division of Spent Fuel Management
Office of Nuclear Material Safety
and Safeguards

Docket No. 72-1004
TAC No. L25011

Enclosure: Second Request for Additional Information

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Second Request for Additional Information

Docket No. 72-1004 Certificate of Compliance No. 1004 Amendment No. 14 to the Standardized NUHOMS® System

By letter dated April 16, 2015, AREVA, Inc. (AREVA) submitted an application to amend Certificate of Compliance (CoC) No. 1004 for the Standardized NUHOMS® System. On August 31, 2015, NRC staff issued its first request for additional information (RAI). On November 11, 2015, AREVA submitted its responses to this first RAI.

This second request for additional information (RAI) identifies additional information needed by the NRC staff in connection with its review of the amendment application. The requested information is listed by topic and/or page number in the application and associated documentation. NUREG-1536, "Standard Review Plan for Dry Cask Storage Systems" was used by the staff in its review of the application.

Each individual RAI section describes information needed by the staff to complete its review of the application and to determine whether the applicant has demonstrated compliance with the regulatory requirements.

3.0 Structural Evaluation

- 3-1 Clarify the impact of thermal stresses induced in the 61BTH DSC during accident conditions when 61 damaged fuel assemblies are considered vs 61 intact fuel assemblies.

Page T.4-39(i)(4) of Section T.4.6.11 indicates that temperatures of the fuel compartment and components within the DSC (rails, neutron absorber, fuel cladding etc.) may increase in temperature as much as 157 degrees Fahrenheit (from 805 to 962 for the fuel compartment) for the 61 damaged fuel assemblies scenario vs the 61 intact fuel assemblies scenario. It is unclear how the expansion of the aforementioned components within the cask will affect the DSC itself with respect to induced stresses from component contact.

This information is required by the staff to determine compliance with the regulatory requirements of 10 CFR 72.236(l).

- 3-2 Clarify how digital radiographic images or real time radioscopy images will be equivalent to film radiography.

The applicant's response to the first RAI No. 3-2, submitted to NRC on November 11, 2015, letter states:

“Section 4.2.4 of the Technical Specifications has been revised to add a reference to Section V, Article II of the ASME Boiler and Pressure Vessel, 2007 Edition, including 2008 and 2009 Addenda. This Code year edition and addenda were chosen because the 2007 Edition of Section III, Subsection NB-5000 is the first Code year to permit the use of digital radiography for examinations for Subsection NB vessels, and Section V, Article II, Appendix VIII provides the image quality acceptance standards for radiography using the phosphor imaging plate technique.”

However, Section V, Article II, Appendix VIII deals with radiography using a phosphor imaging plate and not specifically to digital radiography.

This information is required by the staff to determine compliance with the regulatory requirements of 10 CFR 72.236(l).

4.0 Thermal Evaluation

- 4-1 Provide a discussion in Section T.4.6.11 of the application that shows the average helium temperature remains bounded based on the sensitivity study results provided in Section T.4.6.11 of the application, or provide additional analysis to address any increase in the average helium temperature during hypothetical accident conditions to show there is no impact on the structures, systems, and components (SSCs) important to safety.

It was not addressed in Section T.4.6.11 of the application if the average helium temperature remains bounded during hypothetical accident conditions. An increase in fuel temperature during accident conditions, as shown by the sensitivity study described in Section T.4.6.11 of the application, could result in an increase in the average helium temperature, an increase in the internal pressure, and could impact the structures, systems, and components (SSCs) important to safety during hypothetical accident conditions.

This information is necessary to determine compliance with the regulatory requirements of 10 CFR 72.236(f) and 72.236(l).

- 4-2 Address the following in the Technical Specifications (T.S.) Figure F-31, note “***” to make it more clear in comparison to the description provided in Section U.4.10 of the application.

Technical Specifications Figure F-31, note “***” states, “** denotes locations where failed fuel can (FFC) can be stored. If an FFC is stored at any location denoted by **, INTACT or DAMAGED FUEL ASSEMBLIES shall not be stored in the remaining locations.” It is not clear if the term “remaining locations” refers to, 1) only ** locations, or 2) any zone 2 location for intact fuel, in addition to any location denoted by * for damaged fuel. Section U.4.10 of the application states the maximum heat load of a 32PTH1 DSC with HLZC #3 and 16 failed fuel assemblies is 12.8kW (16 x 0.8 kW = 12.8 kW), therefore the staff concludes if an FFC is stored at any location denoted by **, intact fuel shall not be stored

in any zone 2 location, and in addition damaged fuel shall not be stored in any location denoted by *.

This information is necessary to determine compliance with the regulatory requirements of 10 CFR 72.236(a).