

Enclosure 4 to E-43624

**List of Additional Changes
Not Associated with the RAIs**

Minor Changes to NUHOMS® EOS Application

AREVA TN is requesting multiple changes to the proposed Certificate of Compliance (CoC), Technical Specifications, and the SAR, which are not related to the RAI questions. The proposed changes are minor and will not affect the design functions of any component. These changes facilitate primarily the fabrication of the subject components or are editorial in nature to provide clarification or consistency. The requested changes are discussed in the following sections of this enclosure.

1. Requested Changes in the CoC

The proposed CoC for the NUHOMS® EOS System includes various types of technical detail, which are not customary for their level of detail and do not provide any additional value. AREVA TN is proposing to delete some of the detail descriptions as described below.

1.1 Description of the DSC Support Structure

Under Condition 1.b. (Cask Description), the DSC support structure is described as “a structural steel frame with rails.” As described in SAR Section 3.9.4.1, the DSC support structure provides support for the DSC during storage and also acts as a sliding surface during the insertion and the retrieval of DSC. The description of the DSC support structure as proposed currently in the CoC might be perceived as unclear, i.e., the rail is the steel frame or just the sliding surface. AREVA TN is proposing to revise the description of the DSC support structure in the CoC as follows.

“The DSC support structure is installed within the HSM.”

The design and fabrication of the DSC support structure follows the criteria specified in SAR Sections 2.4.2.2 and 2.4.6 complying with the ACI and AISC Code requirements with code alternatives provided in Section 4.4.4 of the Technical Specifications. Therefore, the proposed change does not have any impact on the design function of the DSC support structure.

1.2 Tying Method of HSM Split Base.

Condition 1.b. (Cask Description) specifies that the two split sections of the alternate HSM base are tied together “via shear keys and tie rods.” Description of the methodology to tie the split base sections does not provide additional information and does not add any value. AREVA TN is proposing to delete the tying method from the subject sentence.

1.3 Weight of Various Transfer Cask Models

Condition 1.b currently describes three different models (including loaded weights) for the EOS-TC system: EOS-TC135, EOS-TC125, and EOS-TC108. The loaded weight of each system is a variable that depends on the type of loaded fuel assemblies. Inclusion of the loaded weight of the system is a technical detail, which is not customarily specified in the CoC. AREVA TN is proposing to remove the loaded weight of the casks from their description in the CoC.

Minor Changes to NUHOMS® EOS Application

2. Correction of Technical Specification 4.3.2 and Allowance for an Alternate Material for the Basket Steel Plates

The Proposed Technical Specification 4.3.2 and the SAR specify the structural steel for the basket conforming to ASTM A506 Gr 4130. ASTM A506 is the standard specification for alloy and structural alloy steel, sheet and strip, hot-rolled and cold-rolled for thicknesses up to 0.25 inches. The basket steel plates used in EOS-37PTH require thicker plates not covered by ASTM A506. AREVA TN is proposing to correct the plate specification from ASTM A506 to ASTM 829. ASTM A829 is the standard specification for alloy structural steel plates without thickness limitations. This proposed change is editorial in nature and does not impact any design function of the basket steel plates.

Additionally, AREVA TN proposes to include in Technical Specification 4.3.2, an alternate high-strength low-alloy (HSLA) steel that conforms to ASTM A829, with deviations from the chemical compositions specified in Table 1 of A829 permitted.

The alternate HSLA steel material and its heat treatment cycle will be qualified by a method similar to the testing performed for Gr 4130 steel, which was provided in Reference [8-24] in the SAR. A summary of the qualification test requirements has been added to SAR Chapter 10 and incorporated by reference into the Technical Specifications.

This change would have no effect on design, as all design properties (i.e., tensile strength, yield strength, and fracture toughness) used in the SAR analyses would be met or exceeded.

The modifications of the Technical Specifications and the SAR related to this proposed change are summarized in Table 1.

**Table 1:
Summary of Changes for Correction of Technical Specification 4.3.2 and
Allowance of an Alternate Material**

TS or SAR Section	Brief Summary of Change
TS 4.3.2	Remove the specification and refer to SAR Section 10.1.7 for requirements
SAR Section 1.2.1.1, 1.2.1.2	Define the basket steel plates as High Strength Low Alloy steel
SAR Section 3.1.1.1	Define the basket steel plates as High Strength Low Alloy steel
SAR Sections 3.9.2.3.6.2, 3.9.2.3.7.1, 3.9.2.3.7.4, 3.9.2.4.7.1, and, 3.9.2.4.7.4, and Table 3.9.2-2	Replace "AISI 4130" with "selected HSLA steel" or "HSLA steel" Alternately, clarify that AISI 4130 is an example of a HSLA steel
SAR Section 3.9.3.3.1	Define AISI 4130 is an example of a HSLA steel
SAR Sections 4.4.2.3.2(B) and 4.4.7.3.1, and Tables 4-2, 4-10, 4-11, 4-15, and 4-22	Remove "AISI 4130" or replace it with "HSLA steel"
SAR Chapter 8 Table of Contents, Sections 8.2.1.1, 8.2.2.1, 8.2.5, 8.2.8, and 8.7, and Table 8-10	Correct "ASTM A506" to "ASTM 829" Remove "4130" or replace it with "HSLA steel" or give an option to use ASTM 829 Gr 4130. Provide a cross-reference to the requirements and acceptance criteria for HSLA steel in SAR Section 10.1.7.
SAR Section 10.1.7	Add cautionary note that portions of Sections 10.1.7 are incorporated by reference into the NUHOMS® EOS System

Minor Changes to NUHOMS® EOS Application

TS or SAR Section	Brief Summary of Change
	Generic Technical Specifications Include qualification test requirements including tensile strength, yield strength and fracture toughness Clarify acceptance criteria
SAR Section 10.4	Correct reference [10-22] from ASTM 506 to ASTM 829 Correct proprietary marking for reference [10-31]
SAR Section 1.3.1 Drawing No. EOS01-1010-SAR	Change note 3 to specify the material of basket steel plates as "high strength low alloy steel as qualified and tested per TS 4.3.2."
SAR Section 1.3.2 Drawing No. EOS01-1020-SAR	

3. Correction of Technical Specification 2.2

A correction is required in Section 2.2 (Fuel to be Stored in the EOS-89BTH DSC) for the RECONSTITUTED FUEL ASSEMBLIES to replace the "<" sign with the "≤" sign. The number of reconstituted fuel assemblies per DSC with irradiated stainless steel rods should be less than or equal to 89. The number of irradiated stainless steel rods per reconstituted fuel assembly should be less than or equal to five. The "equal to" option for these items was inadvertently omitted in Revision 3 of the Technical Specifications.

4. Correction of Technical Specification 5.2.2

In the description for the corrective action after a cask drop, inspection of the transfer cask was previously omitted. AREVA TN is proposing to add inspection of the transfer cask and evaluation of the DSC as part of inspection requirements in TS Section 5.2.2. The inclusion of transfer cask inspection improves the procedures for safe operation of the system.

5. Changes to Chapter 14, Quality Assurance

AREVA TN recently updated the Quality Assurance Program Document Manual. Chapter 14 was modified to reflect this update.

6. Correction of Chapter 4

A configuration table presented in SAR Chapter 4 has been corrected to remove transfer cask EOS-TC135 as an allowable transfer cask to load the EOS-89BTH DSC. This correction makes this table consistent with Figure 2 of the Technical Specifications.

7. Consistency in Providing Technical Specifications Actions Completion Items

To be consistent with other Technical Specifications actions completion times, a completion time of "30 days" is added to LCO 3.1.1 ACTION A.2. Although 30 days is implied, from the ACTION A.1 completion time, this change creates consistency with other LCOs and removes any ambiguity.