Enclosure 2 to E-45666

List of Changes
to TS and SAR

Minor Changes to NUHOMS® EOS Application

AREVA TN is requesting minor changes to the Technical Specifications (TS) and Safety Analysis Report (SAR) based on recent discussions with NRC staff during meetings on June 28th, July 14th, and July 18th. The proposed changes will not affect the design functions of any component. These changes are primarily editorial corrections to provide clarification or consistency. The requested changes are discussed in the following sections of this enclosure.

1. Changes to the TS

1.1 Revision to TS 5.1.3(b)(i) for the daily horizontal storage module (HSM) temperature measurement alternative

The option to perform a daily direct measurement of the dry shielded canister (DSC) temperature (5.1.3(b)(i)(2)) has been deleted. In addition, the option to perform a direct daily measurement of inlet and outlet HSM temperatures has been revised to include a maximum air temperature difference between the inlet and outlet vents of no greater than 138 °F°F[HYT1].

2. Changes to the SAR

2.1 Clarify in SAR Section 8.2.1.2 that the transfer cask cover plate is either ASTM aluminum material or ASME carbon steel

Revision needed for consistency with Table 8-3 and Drawings EOS01-2010-SAR (Item 2a) and EOS01-2000-SAR (Item 2).

2.2 Revise references listed in SAR Section 8.2.3 and 8.7 for fabrication specifications for duplex stainless steel DSCs

The references have been updated to refer to API TR 938-C, Use of Duplex Stainless Steels in the Oil Refining Industry, third edition (2015) or later edition (Ref. 8-46), and to add API RP 582, Welding Guidelines for the Chemical, Oil, and Gas Industries, 3rd edition 2016 or later edition (Ref. 8-47).

2.3 Editorial correction to title of Table 8-6

The title of Table 8-6 has been updated to include SA-479 materials.

2.4 Editorial correction to title of Table 8-7

The title of Table 8-7 has been updated to include SA-479 materials.

2.5 Provide alternative reference for the density value in Table 8-7 and Table 8-8

The reference for the density value for SA-240 2205 in Table 8-7 and the density value for SA-240 NS31803 in Table 8-8 has been revised (new Ref. 8-48).

2.6 Provide clarification in Table 8-9 for the source of the modulus of elasticity (E) values and the thermal conductivity (K) and specific heat (C_p) values

The modulus of elasticity values are from ASME Section II Part D Table TM-1 Group B materials. A footnote has been added to clarify that the K and C_p values are calculated based on Table TCD Group C properties since the composition of SA-350 gr LF3 is bounded by the range of materials listed in Group C.

2.7 Correct the tensile strength (S_u) value at 800 °F and the thermal conductivity value at 800 °F in Table 8-11

Based on ASME Section II Part D 2010 w/ 2011 addenda, the tensile strength (S_u) value at 800 °F is 64.3 and the thermal conductivity value at 800 °F is 25.3. The value for thermal conductivity at 750°F has also been corrected to 26.0.

2.8 Correct the modulus of elasticity values for SA-182, Type F6NM in Table 8-12

The modulus of elasticity source and values have been revised to ASME Section II Part D Table TM-1, Group F rather than ASME Section II Part D Table TM-1, S13800. Additionally, Sections 3.9.5.2.1, 3.9.5.4, and 3.9.5.4.1 have been updated to reflect the corrected corresponding temperature-dependent material properties used in the trunnion evaluation.

2.9 Correct the specific heat values for SA-193 Gr B7 in Table 8-13

The specific heat values have been revised to ASME Section II Part D Table TCD Group C properties. These values pertain to the fasteners and tie rods in the DSC basket and various attachment bolts for HSM components thatand are not explicitly included in the thermal model; therefore, there is no effect on the analysis provided in the SAR.

2.10 Remove values for the thermal conductivity and specific heat at -20 °F for SA-540 Grade B23 Class 1 in Table 8-14

The source document (Table TCD for Group D materials) for these values does not provide a value for these parameters at -20 °F.°F, and are therefore removed from Table 8-14. These values are not used in any analyses.

2.11 Editorial correction to footnote designations in Table 8-15

Clarification has been added to the footnote designations. In addition, theaddition, the symbol for density has been changed from gamma (γ) to rho (ρ).

2.12 Tensile strength values listed in Table 8-17 corrected

The tensile strength values listed from ASM Metals Handbook, Ninth Edition, Volume 2 have been corrected. Note that these values are not used in the analyses.

2.13 Clarifications added to Table 8-18

Since the temperature-dependent values of S_u and S_y for the aluminum weld and the heat affected zone (HAZ) are not used in the structural calculations, these two columns have been deleted from Table 8-18. The title and notes for the table have also been revised accordingly. Reference 8-25 has also been deleted as it is no longer used in the table or elsewhere in the SAR. Additionally, Section 8.2.2.2 has been updated to appropriately reflect these properties.

2.14 Footnote 1 in Table 8-19 clarified

Footnote 1 in Table 8-19 has been revised to delete reference to Page 171 of Reference 8-16 (Kaufman 1999) for tensile and yield strength values. The tensile and yield strength columns correctly identify Reference 8-16 (Kaufman 1999) Page 9 for these values.

2.15 Editorial correction to title of Table 8-24

Title has been corrected to reference ASTM A706 Grade 60 (i.e., not 600).

2.15 Changes made to SAR Section 4.9.4 based on discussions with NRC staff

Sections 4.9.4.7, 4.9.4.8, and 4.9.4.9 have been revised. Tables 4.9.4-4 to 4.9.4-9 have been added. Figures 4.9.4-10 and 11 have been added.