



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

June 8, 2023

Prakash Narayanan
Chief Technical Officer
TN Americas LLC
7135 Minstrel Way, Suite 300
Columbia, MD 21045

SUBJECT: AMENDMENT NO. 3 TO CERTIFICATE OF COMPLIANCE NO. 1042 FOR THE NUHOMS® EOS SYSTEM (DOCKET NO. 72-1042, CAC NO. 001028, (ENTERPRISE PROJECT IDENTIFIER: L-2021-LLA-0055))

Dear Prakash Narayanan:

As requested by your application dated March 31, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML21102A281), as supplemented in letters dated June 23, 2021 (ML21174A231), August 4, 2021 (ML21209A098), September 3, 2021 (ML21246A136), October 22, 2021 (ML21295A260), November 30, 2021 (ML21334A206), February 25, 2022 (ML22056A458), June 7, 2022 (ML22158A293), June 29, 2022 (ML22180A266), September 30, 2022 (ML22273A031), October 31, 2022 (ML22304A217), November 14, 2022 (ML22318A205), and December 21, 2022 (ML22355A219), enclosed is Amendment No. 3 to Certificate of Compliance (CoC) No. 1042 for the NUHOMS® EOS System. The amended certificate constitutes the U.S. Nuclear Regulatory Commission's (NRC) approval for use of the NUHOMS® EOS System for storage of spent nuclear fuel under the general licensing provisions of Title 10 of the *Code of Federal Regulations* Part 72, Subparts K and L, subject to the conditions in the amended certificate. This amendment revises the CoC for the NUHOMS® EOS System to include the following changes:

Change No. 1:

Add three new heat load zone configurations (HLZCs) for the EOS-89BTH Dry Shielded Canister (DSC), with increased heat load up to 1.7 kW per fuel assembly, which reduces the minimum cooling time to 1 year.

Change No. 2:

Add a variable-lead thickness EOS-TC125 for transfer with the EOS-89BTH DSC.

Change No. 3:

Add ATRIUM 11 fuel as an allowable content in the EOS-89BTH DSC. Reran the limiting GNF2 and ABB-10-C cases to reduce the statistical uncertainties and increase the enrichment limits.

Change No. 4:

Update the criticality evaluation to allow short-loading the EOS-89BTH DSC with less than 89 fuel assemblies to increase the enrichment limits.

Change No. 5:

For the technical specifications (TS); a revision to allow for phased array automated ultrasonic testing and to utilize a single pass high amperage gas tungsten arc weld (HA-GTAW) or multipass GTAW on the outer top cover plate.

Change No. 6:

For the TS; a revision to reduce EOS-37PTH HLZC 1 and 2 time limit for transfer to 8 hours.

Change No. 7:

Incorporate a method to determine new loading patterns based on the maximum allowable heat load per DSC and per location specified in the TS. All HLZCs and time limits for transfer for the EOS-89BTH DSC transferred in the EOS-TC125 are moved from the TS to the updated final safety analysis report (UFSAR) chapter 2.

Change No. 8:

For the single bottom forging EOS-DSCs, waive the fabrication pressure test requirement.

Change No. 9:

TS and UFSAR changes for consistency among DSC types and terminology clarifications.

Additional Scope Change No. 1:

UFSAR revisions associated with transfer cask lifting heights and consideration of severe weather.

Additional Scope Change No. 2:

UFSAR revisions associated with maintaining water in the annulus.

Additional Scope Change No. 3:

Design changes to the Matrix Loading Crane.

As stated in the *Federal Register* (88 FR 27397, May 2, 2023), the effective date of this CoC is July 17, 2023. The NRC safety evaluation report for this amended CoC (including the CoC itself and TS) is enclosed. If you have any questions regarding this amended certificate, please contact Christian Jacobs at (301) 415-6825.

Sincerely,



Signed by Diaz-Sanabria, Yaira
on 06/08/23

Yaira Diaz Sanabria, Chief
Storage and Transportation Licensing Branch
Division of Fuel Management
Office of Nuclear Material Safety
and Safeguards

Docket No.: 72-1042
CAC No.: 001028
EPID: L-2021-LLA-0055

Enclosures:

1. Final CoC No. 1042, Amendment No. 3
2. Final Technical Specifications
3. Final Safety Evaluation Report

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