



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

January 13, 2021

MEMORANDUM TO: Christopher Regan, Deputy Director
Division of Fuel Management
Office of Nuclear Material Safety
and Safeguards

FROM: Bernard White, Senior Project Manager
Storage and Transportation Licensing Branch
Division of Fuel Management
Office of Nuclear Material Safety
and Safeguards

SUBJECT: SUMMARY OF AUGUST 18, 2020, MEETING TO DISCUSS THE
TN EAGLE TRANSPORTATION PACKAGE APPLICATION

Purpose

TN Americas LLC (TN) requested the partially-closed meeting to provide to the U.S. Nuclear Regulatory Commission (NRC) staff an overview of its design and preliminary evaluations for the Model No. TN Eagle spent fuel transportation package.

Background

On August 18, 2020, a partially-closed meeting was via teleconference between the NRC staff and TN to discuss the design for the TN-Eagle transportation package. The meeting was noticed on July 27, 2020 (see Agencywide Documents Access and Management System (ADAMS) Accession No. ML20209A372). The list of meeting attendees is provided as Enclosure 1. The non-proprietary presentation slides are in ADAMS under Accession No. ML20198M576, and the proprietary slides are under Accession No. ML20198M577.

Discussion

In the open portion of the meeting TN provided a high-level overview of the new package design. The TN-Eagle will be a single-forged body surrounded by neutron shielding. The package will be designed to transport bare pressurized-water (PWR) and boiling-water reactor (BWR) spent fuel, canisters for the Model Nos. NUHOMS[®] EOS-37PTH, and -89BTH (Docket No. 72-1042) storage system, and canisters listed in the certificates for the Model Nos. NUHOMS[®] MP187 Multi-Purpose Cask, and NUHOMS[®]-MP197HB (Certificate of Compliance Nos. 9255 and 9302, respectively). The package is designed to hold up to 37 PWR fuel assemblies or 89 BWR fuel assemblies. TN also stated that it plans to start manufacturing the first package, at risk, prior to the end of 2020.

CONTACT: Bernard White, NMSS/DFM
(301) 415-6577

In the closed portion of the meeting, TN discussed its submittal plans and provided a detailed overview of the package design. TN provided an overview of its structural, thermal, containment, shielding, and criticality evaluations. TN discussed its structural analyses and preliminary results related to material stresses for normal conditions of transport and the preliminary results of package deformation for hypothetical accident conditions. TN discussed its methodology for the thermal review of the package for both normal conditions of transport and hypothetical accident conditions. TN discussed the assumptions used in its thermal analyses for normal conditions of transport and hypothetical accident conditions. TN's preliminary analyses show that the peak fuel cladding temperature and packaging components remain below their design temperatures.

TN also discussed its shielding and criticality analyses for the TN Eagle package, along with assumptions used in these analyses. TN stated that its preliminary dose rates comply with NRC requirements in Title 10 of the *Code of Federal Regulation* 71.47 and 71.51, after the tests for normal conditions of transport and hypothetical accident conditions, respectively. Similarly, TN stated that its preliminary analyses demonstrate that a single package and an array of packages will remain subcritical after the tests for normal conditions of transport and hypothetical accident conditions.

TN Americas LLC stated that it plans to submit its application in late 2020. TN also discussed its plans for future submittals.

Docket No. 71-9382
EPID No. L-2019-LRM-0073

Enclosure:

1. Meeting Attendees

C. Regan

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DATED: January 13, 2021

Closes EPID No. L-2020-LRM-0069

DISTRIBUTION: D. Marcano, M. George, NMSS

ADAMS Accession Number: ML21008A356 * via email

OFFICE	DFM	DFM	DFM
NAME	BWhite	SFigueroa*	JMcKirgan*
DATE	1/8/2021	1/12/2021	1/12/2021

MEETING ATTENDEES

Meeting Title: AUGUST 18, 2020, MEETING WITH TN AMERICAS TO DISCUSS THE PROPOSED APPLICATION FOR THE TN-EAGLE TRANSPORTATION PACKAGE

Participants: TN Americas LLC and the NRC

Date: August 18, 2020

NAME	AFFILIATION
Bernie White	NRC/NMSS/DFM
John McKirgan	NRC/NMSS/DFM
Jimmy Chang	NRC/NMSS/DFM
Richard Chang	NRC/NMSS/DFM
Ricardo Rodriguez	NRC/NMSS/DFM
Darrell Dunn	NRC/NMSS/DFM
Marilyn Diaz	NRC/NMSS/DFM
Veronica Wilson	NRC/NMSS/DFM
JoAnn Ireland	NRC/NMSS/DFM
Andrew Barto	NRC/NMSS/DFM
Chris Jacobs	NRC/NMSS/DFM
Tom Boyce	NRC/NMSS/DFM
Matthew Learn	NRC/NMSS/DFM
Donis Shaw	TN Americas
Prakash Narayanan	TN Americas
Peter Vescovi	TN Americas
Lionel Antognelli	TN Americas
Raheel Haroon	TN Americas
Tan Trieu Pham	TN Americas
Dimitris Hadjiharitou	TN Americas
Andrew Robinson	TN Americas
Jun Li	TN Americas
Hui Liu	TN Americas
Sarah Onimus	TN Americas
Venkata Venigalla	TN Americas
Carlyn Green	Ux Consulting