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

October 23, 2023

Mr. David Hill, Chief Technology Officer
Terrestrial Energy USA, Inc.
537 Steamboat Rd, Suite 200
Greenwich, CT, 06830

SUBJECT: TERRESTRIAL ENERGY USA, INC. - THE U.S. NUCLEAR REGULATORY COMMISSION STAFF'S FEEDBACK REGARDING REVISION 1 OF TECHNICAL REPORT ON UNCERTAINTY QUANTIFICATION METHODOLOGY FOR CALCULATION OF INTEGRAL MOLTEN SALT REACTOR® OFF-GAS SOURCE TERM

Dear Mr. Hill:

By letter dated July 26, 2023 (Agencywide Documents Access and Management System Accession No. ML23228A045), Terrestrial Energy USA, Inc. (TEUSA), submitted for the U.S. Nuclear Regulatory Commission (NRC) staff's review:

TEUSA Letter: #230726, "Submittal of Revision 1 of Technical Report on Uncertainty Quantification Methodology for Calculation of IMSR® Off-Gas Source Term"

The white paper presents a methodology for performing uncertainty quantification analysis for the Terrestrial Energy Integral Molten Salt Reactor (IMSR®) source term. The NRC staff was asked to perform a review of this technical report and provide written feedback. The enclosure to this letter provides the NRC staff's informal and non-binding feedback for TEUSA to consider.

The enclosure to this letter contains proprietary information. When separated from the enclosure, this document is DECONTROLLED.

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If you have questions regarding this matter, please contact Lucieann Vechioli Feliciano at (301) 415-6035 or via email at Lucieann.VechioliFeliciano@nrc.gov.

Sincerely,



Signed by Wentzel, Michael
on 10/23/23

Michael Wentzel, Chief
Advanced Reactor Licensing Branch 2
Division of Advanced Reactors and Non-Power
Production and Utilization Facilities
Office of Nuclear Reactor Regulation

Project No.: 99902076

Enclosure:
As stated

cc without encl: dcarleton@terrestrialusa.com
Terrestrial Energy USA via GovDelivery

SUBJECT: TERRESTRIAL ENERGY USA, INC. – THE U.S. NUCLEAR REGULATORY COMMISSION STAFF’S FEEDBACK REGARDING REVISION 1 OF TECHNICAL REPORT ON UNCERTAINTY QUANTIFICATION METHODOLOGY FOR CALCULATION OF INTEGRAL MOLTEN SALT REACTOR® OFF-GAS SOURCE TERM DATED: OCTOBER 23, 2023

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Pkg: ML23286A111

Letter: ML23286A100

Enclosure: ML23286A098

NRR-106

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