



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

March 8, 2022

Mr. Simon Irish  
Chief Executive Officer  
Terrestrial Energy USA, Inc.  
537 Steamboat Road, Suite 200  
Greenwich, CT 06830

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION STAFF FEEDBACK  
REGARDING TERRESTRIAL ENERGY'S METHODOLOGY FOR SAFETY  
CLASSIFICATION OF INTEGRAL MOLTEN SALT REACTOR STRUCTURES,  
SYSTEMS AND COMPONENTS WHITE PAPER (EPID NO. L-2021-LRO-0044)

Dear Mr. Irish:

By letter dated November 8, 2021 (Agencywide Documents Access and Management System (ADAMS) Package Accession No. ML21323A017), Terrestrial Energy USA (TEUSA), submitted a white paper titled, "Methodology for Safety Classification of IMSR® Structures, Systems and Components," for the U.S. Nuclear Regulatory Commission (NRC) staff's review. The white paper describes the methodology used by Terrestrial Energy Inc. (TEI) for classifying structures, systems, and components (SSCs) of the IMSR® design.

TEUSA requested that the NRC staff review the white paper and provide written comments regarding areas where the white paper does not provide sufficient detail for the NRC staff to have a clear understanding of the methodology for safety classification of IMSR® SSCs. The NRC staff's comments are provided in Enclosure 1 (Proprietary) and Enclosure 2 (Non-Proprietary) of this document.

If you have any questions regarding this matter, please contact Adrian Muñoz at (301) 415-4093 or via e-mail at [Adrian.Muniz@nrc.gov](mailto:Adrian.Muniz@nrc.gov).

Sincerely,

Handwritten signature of William B. Kennedy in black ink.

Signed by Kennedy, William  
on 03/08/22

William Kennedy, Acting Chief  
Advanced Reactor Licensing Branch  
Division of Advanced Reactors and Non-Power  
Production and Utilization Facilities  
Office of Nuclear Reactor Regulation

Project No.: 99902076

Enclosures: As stated

Enclosure 1 to this letter contains Proprietary information. When separated from Enclosure 1, this document is DECONTROLLED.

**OFFICIAL USE ONLY – PROPRIETARY INFORMATION**

S. Irish

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DATED: MARCH 8, 2022

**DISTRIBUTION:**

Public (Letter and Enclosure 2 only)

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**ADAMS Accession Nos.:**

**Package: ML22033A371**

**Cover Letter: ML22033A370 (Public)**

**Enclosure 1: ML22033A450 (Non-Public)**

**Enclosure 2: ML22033A458 (Redacted- Public)**

**NRR-106**

<b>OFFICE</b>	NRR/DANU/UARL:PM	NRR/DANU/UARL:LA	NRR/DANU/UTB1:BC	NRR/DANU/UARL:BC(A)
<b>NAME</b>	AMuñiz	CSmith	MHayes	WKennedy
<b>DATE</b>	02/03/2022	02/09/2022	02/09/2022	03/08/2022

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