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

September 29, 2026

George Wilson
Chief Nuclear Officer
Senior Vice President, Regulatory Affairs
TerraPower, LLC
15800 Northup Way
Bellevue, WA 98008

SUBJECT: US SFR OWNER, LLC – ASSESSMENT OF APPLICABILITY OF 10 CFR 74.19

Dear George Wilson:

By letter dated July 22, 2026 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML26203A216), TerraPower, LLC (TerraPower) on behalf of US SFR Owner, LLC (USO), a wholly owned subsidiary of TerraPower, requested that the U.S. Nuclear Regulatory Commission (NRC) staff provide an interpretation and assessment regarding the regulatory process for, and applicability of, Title 10 of the *Code of Federal Regulations* (10 CFR) Part 74, "Material Control and Accounting of Special Nuclear Material," as it pertains to the utilization of high-assay low-enriched uranium (HALEU) fuel in a Natrium reactor.

Because the information provided in TerraPower's July 22, 2026, letter is preliminary and does not constitute a license application, the following NRC staff responses do not constitute either a review or approval of the use of the planned HALEU fuel. Additionally, the NRC staff understands that, based on the descriptions in TerraPower's letter, whether USO ultimately seeks a license under 10 CFR Part 50 or 10 CFR Part 53, the licensed facility would use HALEU fuel. If the actual use of HALEU fuel differs from the descriptions and information in TerraPower's July 22, 2026, letter, the NRC staff's responses provided below may not be applicable.

BACKGROUND

On March 9, 2026 (ML26034B247), a construction permit (CP) was issued for the Kemmerer Unit 1 reactor (KU1). Following the issuance of the CP, TerraPower submitted a revision to their operating license (OL) application regulatory engagement plan (REP) on March 3, 2026. TerraPower's REP described, in part, TerraPower's plans to submit an OL application.

By letter dated July 22, 2026, TerraPower submitted a request to the NRC staff on behalf of USO, seeking confirmation of its determination that the use of HALEU fuel would be subject to certain provisions in 10 CFR Part 74.

REGULATORY ANALYSIS

In accordance with 10 CFR 70.22(b), certain applicants requesting a license to possess special nuclear material (SNM) must submit a full description of their program for the control and accounting of SNM in the applicant's possession and to show compliance with 10 CFR 74.31, 74.33, 74.41, or 74.51, as applicable. The requirements in 10 CFR 70.22(b) apply to licenses to possess SNM in a quantity exceeding one effective kilogram. However, 10 CFR 70.22(b) excepts licensees governed by 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities" and 10 CFR Part 53, "Risk-Informed, Technology-Inclusive Regulatory Framework For Commercial Nuclear Plants." The same applicability and exceptions for Part 50 and 53 licensees are in the Material Control and Accounting (MC&A) requirements in 10 CFR 74.31, 74.41, and 74.51, which contain specific control and accounting requirements for certain licensees, depending on the different types and quantities of SNM in possession.

If the Kemmerer Unit 1 application is submitted under Part 50 or 53, it would therefore be excepted from 10 CFR Part 74 Subpart C (by 10 CFR 70.22(b) and 74.31), Subpart D (by 10 CFR 74.41), and Subpart E (by 10 CFR 74.51). Kemmerer Unit 1 would also be excepted from 10 CFR 74.17, as those provisions are applicable only to licensees subject to 10 CFR 74.31, 74.33, 74.41, or 74.51. In sum, the MC&A requirements that would be applicable to Kemmerer Unit 1 are 10 CFR 74.11, 74.13, 74.15, and 74.19.

CONCLUSION

With respect to the MC&A requirements in 10 CFR Part 74, if Kemmerer Unit 1 is ultimately licensed under Part 50 or Part 53, it would be subject to only 10 CFR 74.11, 74.13, 74.15, and 74.19. The NRC staff agrees with the conclusion in TerraPower's July 22, 2026, letter (ML26203A216).[1]

If you have any questions on this matter, please contact Mallecia Sutton via email at Mallecia.Sutton@nrc.gov.

[1] This letter is provided solely in response to the specific request from USO, LLC. It does not constitute generally applicable guidance, and should not be relied upon by parties other than the requestor. This letter does not create legally enforceable rights or obligations.

Sincerely,


Signed by William Kennedy on 09/29/26

William B. Kennedy, Chief
Advanced Reactor Licensing Branch 1
Division of Advance Reactor Programs
Office of Advanced Reactors

Project No.: 99902100

cc: Gov Delivery

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