X Energy, LLC
530 Gaither Road, Suite 700
Rockville, MD 20850
+1 301.358.5600

April 4, 2025

2025-XE-NRC-005

Project No. 99902118

U.S. Nuclear Regulatory Commission
Document Control Desk
11555 Rockville Pike
Rockville, MD 20852

Re: Submission of X-energy, LLC, XENITH™ Principal Design Criteria Licensing Topical Report, Revision 3

I am pleased to submit on behalf of X-energy, LLC (X-energy), an enclosed Controlled Unclassified Information (CUI) version of X-Energy's Next-Generation Integrated Transportable High-Temperature (XENITH) microreactor pre-application licensing topical report (LTR) that describes the updated development of the XENITH microreactor plant's principal design criteria (PDC), Rev. 3. The enclosed XENITH PDC LTR includes the updated XENITH microreactor design team's assumptions and analysis associated with the PDC requirements outlined in the NEI 18-04 guidance. The XENITH PDC LTR, Rev. 3, is provided to the NRC for review and approval as indicated in the report and is expected to be referenced in future XENITH licensing applications. X-energy requests that an acceptance review of the revised LTR occurs within 60 days of the submittal; and that the total review duration be updated and communicated as a result of the submittal of this new information.

This submittal contains CUI information from X-energy and shall not be distributed and/ or disseminated outside of its intended audience without the consent of the Department of Defense's Strategic Capabilities Office. In conformance with the requirement of 10 CFR Section 2.390, as amended, of the NRC's regulations, we are enclosing with this submittal an Affidavit. The Affidavit sets forth the basis on which the information identified as CUI should be withheld from public disclosure.

X Energy, LLC
530 Gaither Road, Suite 700
Rockville, MD 20850
+1 301.358.5600

This letter contains no commitments. Should you have any questions or require additional information, please contact Michael Dudek at mdudek@x-energy.com

Sincerely,

Michael I. Dudek
Licensing Manager, XENITH Microreactor Program
X-energy, LLC

Cc:
X-energy, LLC
Randy Eubanks
Robert Taylor
Hans Gouger
Renee Robinson
Steve Vaughn

U.S. Nuclear Regulatory Commission
John Segala
Patrick Boyle
Michelle Vega Rodriguez

Enclosures:
(1) Affidavit
(2) X-energy XENITH Microreactor Principal Design Criteria Licensing Topical Report (CUI), Rev. 2