



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

April 11, 2024

Dr. Bradley Rearden, Senior Director
Microreactor Program
X-Energy, LLC.
801 Thompson Avenue
Rockville, MD 20852

SUBJECT: REQUEST FOR WITHHOLDING INFORMATION FROM PUBLIC DISCLOSURE
FOR X-ENERGY, LLC. - PREAPPLICATION ENGAGEMENT PRESENTATION,
"XENITH MICROREACTOR: CRITICALITY-RELATED ASSUMPTIONS AND
DESIGN FEATURES"

Dear Dr. Rearden:

By letter dated February 1, 2024 (Agencywide Documents Access and Management System Package Accession No. ML24032A480), you submitted an affidavit executed by you for X-Energy, LLC. (X-energy), requesting that the information contained in the following document be withheld from public disclosure pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 2, Section 2.390:

"XENITH Microreactor: Criticality-Related Assumptions and Design Features"

The affidavit stated that the submitted information should be considered exempt from mandatory public disclosure for the following reasons:

- a) The information sought to be withheld from public disclosure in Enclosure 2 is owned by X-energy. This information was prepared with the explicit understanding that the information itself would be treated as proprietary and confidential and has been held in confidence by X-energy.
- b) The information sought to be protected in Enclosure 2 is not available to the public.
- c) The information contained in Enclosure 2 is of the type that is customarily held in confidence by X-energy, and there is a rational basis for doing so. The information X-energy is requesting to be withheld from public disclosure includes technical information related to the design, analysis and operations associated with our XENITH high-temperature, gas-cooled, microreactor design that directly impact our business development and commercialization efforts. X-energy limits access to this proprietary and confidential information in order to maintain confidentiality.

- d) Enclosure 2 contains information about the planned activities of X-energy related to the development of the XENITH design bases, TRISO-X fuel design bases, forecast design development timeframes, and relates to the commercialization strategy for our XENITH microreactor. Public disclosure of the information contained in Enclosure 2 would create substantial harm to X-energy because it would reveal valuable technical information regarding X-energy's design development, competitive expectations, assumptions, current position, and strategy. Its use by a competitor could substantially improve the competitor's position in the design, manufacture, licensing, construction, and operation of a similar competing product.
- e) The Proprietary Information contained in Enclosure 2 is transmitted to the NRC in confidence and under the provisions of 10 CFR 2.390; it is to be received in confidence by the NRC. The Export-controlled Information contained in Enclosure 2 is transmitted to the NRC in confidence and under the provisions of 10 CFR 810 and 10 CFR 110; it must be withheld from disclosure and is to be received in confidence by the NRC.
- f) Enclosure 2 contains Controlled Unclassified Information (CUI) under Department of Defense (DoD) Distribution Statement F. Further Dissemination only as directed by The Strategic Capabilities Office, Meadows 14755 Meadow Wood Lane, Chantilly, VA 20151, 29 December 2022 or higher DoD Authority.

We have reviewed your application and the material in accordance with the requirements of 10 CFR 2.390 and, on the basis of the statements in the affidavit, have determined that the submitted information sought to be withheld, contains proprietary commercial information, and should be withheld from public disclosure.

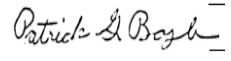
Therefore, the document titled, "XENITH Microreactor: Criticality-Related Assumptions and Design Features", marked as proprietary, will be withheld from public disclosure pursuant to 10 CFR 2.390(b)(5) and Section 103(b) of the Atomic Energy Act of 1954, as amended.

Withholding from public inspection shall not affect the right, if any, of persons properly and directly concerned to inspect the documents. If the need arises, we may send copies of this information to our consultants working in this area. We will, of course, ensure that the consultants have signed the appropriate agreements for handling proprietary information.

If the basis for withholding this information from public inspection should change in the future such that the information could then be made available for public inspection, you should promptly notify the NRC. You also should understand that the NRC may have cause to review this determination in the future, for example, if the scope of a Freedom of Information Act request includes your information. In all review situations, if the NRC makes a determination adverse to the above, you will be notified in advance of any public disclosure.

If you have any questions regarding this matter, I may be reached at (301) 415-3936 or via email at Patrick.Boyle@nrc.gov.

Sincerely,

 Signed by Boyle, Patrick
on 04/11/24

Patrick Boyle, Project Manager
Advanced Reactors Licensing Branch 2
Division of Advanced Reactors and Non-Power
Production and Utilization Facilities
Office of Nuclear Reactor Regulation

Project No.: 99902118

cc: mdudek@x-energy.com
brearden@x-energy.com

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