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Project No. 99902071

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Submission of X Energy, LLC (X-energy) Xe-100 Topical Report: TRISO-X Pebble Fuel Qualification Methodology

The purpose of this letter is to submit the subject topical report on behalf of X Energy, LLC ("X-energy"). This submission provides the methodology taken by X-energy to qualify our proprietary tristructural isotropic (TRISO)-coated particle fuel for the Xe-100 reactor. It is provided for NRC review and approval as indicated in the report, and is expected to be referenced in future Xe-100 licensing applications. The specific review schedule will continue to be developed with X-energy's NRC project manager, however, we request that acceptance review and schedule planning occur within 60 days of commencement and a review duration of 12 months be considered.

This report contains commercially sensitive, proprietary information and, as such, we are requesting that this information be withheld from public disclosure in accordance with 10 CFR 2.390, "Public inspections, exemptions, request for withholding," paragraph (a)(4). Enclosure 1 is the Non-Public version of the report which contains non-redacted sensitive information. This proprietary information is appropriately marked and an affidavit providing the basis for this request is provided in Enclosure 2. A redacted copy of the report that contains non-proprietary content will be completed and submitted separately.

Additionally, certain information in this report was determined to contain Export Controlled Information (ECI). This information must be protected from disclosure pursuant to 10 CFR 810.

If you have any questions or require additional information, please contact Travis Chapman at tchapman@x-energy.com.

Sincerely,

DocuSigned by:
A handwritten signature in black ink that reads "Martin van Staden".
0C0C2506D0DD425

Dr. Martin van Staden
Vice President, Xe-100 Program Manager
X Energy, LLC



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Enclosures:

- 1) Xe-100 Topical Report: TRISO-X Pebble Fuel Qualification Methodology
- 2) Affidavit