Katie Wagner

From: Katie Wagner
Sent: Monday, November 07, 2022 4:14 PM
To: Travis Chapman
Cc: Ingrid Nordby; Lucieann Vechioli Feliciano; William Jessup
Subject: Transmittal Email – X Energy, LLC - Draft Safety Evaluation of Xe-100 Topical Report: TRISO-X Pebble Fuel Qualification Methodology, Revision No. 3 (EPID NO. L-2021-TOP-0011)

Mr. Chapman,

By letter dated April 30, 2021 (Agencywide Document Access and Management System (ADAMS) Package Accession No. ML21120A332), X Energy, LLC (X-energy), submitted for U.S. Nuclear Regulatory Commission (NRC) staff review XE00-R-R1ZZ-RDZZ-L-000632, Revision 1 of "Xe-100 Topical Report: TRISO-X Pebble Fuel Qualification Methodology." This topical report (TR) provides information intended to qualify the TRISO-coated particle fuel pebbles to be used in the Xe-100 high-temperature gas-cooled reactor design under development by X-energy. A closed public meeting was held on June 4, 2021, to provide NRC staff with an overview of the TR (ML21354A289).

By letter dated September 2, 2021 (Agencywide Document Access and Management System Accession No. ML21246A289), X Energy, LLC (X Energy), submitted for NRC staff review XE00-R-R1ZZ-RDZZ-L-000633, Revision 2 of "Xe-100 Topical Report: TRISO-X Pebble Fuel Qualification Methodology" to supersede the previous revision that included an updated figure based on NRC staff feedback during the June 4, 2021 meeting, and to provide both proprietary and non-proprietary versions of the report.

The NRC staff reviewed the report and based on the review, issued requests for additional information (RAIs) regarding Revision 2 of the TR on December 2, 2022 (ML21334A233 (non-public)). Subsequently, a closed public meeting was held on February 10, 2022 to clarify the RAI questions. NRC staff then received RAI responses on February 28, 2022 (ML22059A770).

A closed public meeting was held on May 20, 2022 (ML22166A424) to discuss the RAI responses submitted by X-energy. Afterward, by letter dated July 29, 2022, X-energy submitted for NRC staff review XE00-R-R1ZZ-RDZZ-L-000633, Revision 3 of its TR (ML22216A179) to the NRC staff, which addressed content submitted in the RAI questions.

The NRC staff has placed a copy of the draft SE for Xe-100 Topical Report: TRISO-X Pebble Fuel Qualification Methodology, Revision 3 in the box.com folder to which you have access. Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Section 2.390, "Public inspections, exemptions, requests for withholding," the NRC staff is providing the enclosed draft SE for X-energy to identify any proprietary information within the draft SE. If you believe that any information in the enclosure is proprietary, please identify such information line-by-line and define the basis pursuant to the criteria of 10 CFR 2.390. Use double brackets and yellow highlight to identify any proprietary information as follows: [[proprietary information]]. Please provide comments on any proprietary aspects of the draft SE within 15 working days from the date of this letter. Your response must be via a letter from an authorized individual. Both this email and the draft SE will be placed in ADAMS and made Official Agency Records. If the SE includes proprietary information, there will be both proprietary and non-proprietary versions of the SE, and the non-proprietary version will be made publicly available.

If you have any questions or comments concerning this matter, I can be reached at 301-415-6202 or by email at Katie.Wagner@nrc.gov.

Project No.: 99902071

Regards,

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