



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

July 9, 2024

Gayle Elliott, Director
Licensing and Regulatory Affairs
Framatome Inc.
3315 Old Forest Road
Lynchburg, VA 24501

SUBJECT: THE U.S. NUCLEAR REGULATORY COMMISSION STAFF'S ACCEPTANCE OF REQUEST FOR REVIEW AND APPROVAL OF FRAMATOME'S TOPICAL REPORT, ANP-10354P, REVISION 0, "SINGLE-PHASE COMPUTATIONAL FLUID DYNAMICS FUEL ASSEMBLY CHARACTERIZATION" (EPID L-2024-NTR-0000)

Dear Gayle Elliott:

By letter dated May 22, 2024 (Agencywide Documents Access and Management System (ADAMS) Package Accession No. ML24143A171), Framatome, Inc. (Framatome) submitted Topical Report (TR) ANP-10354P, "Single-phase Computational Fluid Dynamics (CFD) for Fuel Assembly Characterization," for U.S. Nuclear Regulatory Commission (NRC) staff's review and approval. The TR describes a methodology for the calculation of pressure losses in light water reactor fuel assemblies, and the methodology uses a CFD code to calculate the pressure losses. The NRC staff held pre-submittal meetings with Framatome on June 23, 2022 (ADAMS Package Accession No. ML22174A417) and June 7, 2023 (ADAMS Package Accession No. ML23157A199). The NRC staff granted a fee waiver in a letter dated March 27, 2023 (ADAMS Accession No. ML23047A119), per Title 10 of the *Code of Federal Regulations* (10 CFR) 170.11, with the understanding that the TR review will be used by the NRC staff to develop CFD guidance to facilitate future reviews in this area.

The NRC staff found that the information presented in ANP-10354P is sufficient to begin the detailed technical safety review. However, the NRC staff notes that this review represents a first of a kind (FOAK) TR on an advanced methodology which uses an analytical approach. The NRC staff also recognizes that the FOAK nature of this TR and the corresponding lack of specific regulatory guidance or precedent for this type of analytical approach means that the regulatory uncertainty associated with this review is higher than that for typical TRs. As a result, the NRC staff may identify the need for substantial additional technical information or justification for the sufficiency of the proposed analytical approach.

To facilitate the TR review, the NRC staff plans to conduct a virtual audit on July 30-31, 2024, and an in-person audit in October 2024. Regarding the overall review, the NRC staff plans to issue Requests for Additional Information (RAIs) by April 2025, the draft safety evaluation (SE) by February 2026, and final SE by May 2026, as annotated in the enclosed schedule. The NRC staff will determine if additional audits and rounds of RAIs are needed later in the review. The

initial schedule assumes that Framtome's responses to the NRC staff's RAIs will be submitted within 60 days of issuance.

This schedule information takes into consideration the NRC's current review priorities and available technical resources and may be subject to change. If modifications to these dates are deemed necessary, we will provide appropriate updates to this information. The review schedule milestones were discussed and agreed upon between Jerald Holm and the NRC staff on July 5, 2024. The Advisory Committee on Reactor Safeguards (ACRS) will decide on whether it is interested in reviewing this TR, and as such, subcommittee and full committee meetings are estimated to occur in March 2026, and April 2026, respectively to facilitate this effort. The specific ACRS meeting dates will be confirmed and scheduled later if the ACRS requests a review of the TR.

If you have any questions regarding the TR review, please contact me at 301-415-6695 or via email at Ngola.Otto@nrc.gov.

Sincerely,

/RA/

Ngola A. Otto, Project Manager
Licensing Projects Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No.: 99902041

Enclosure:
Initial Schedule

Initial Schedule

<u>Milestone</u>	<u>Date</u>
Initial Submittal	May 2024
Acceptance	July 2024
Audit #1	July 2024
Audit #2	October 2024
Requests for Additional Information	April 2025
Issue Draft Safety Evaluation (SE)	February 2026
Advisory Committee on Reactor Safeguards (ACRS) Sub-Committee Meeting	March 2026
ACRS Full Committee Meeting	April 2026
Issue Final SE	May 2026

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***via email**

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