



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

April 22, 2022

Mr. Gary Peters, Director
Licensing and Regulatory Affairs
Framatome Inc.
3315 Old Forest Road
Lynchburg, VA 24501

**SUBJECT: APRIL 20 - 21, AND 28, 2022, REGULATORY AUDIT PLAN FOR
 FRAMATOME INC. TOPICAL REPORT, ANP-10339P, REVISION 0, "ARITA -
 ARTEMIS/RELAP INTEGRATED TRANSIENT ANALYSIS METHODOLOGY"
 (EPID L-2018-TOP-0034)**

Dear Mr. Peters:

By letter dated August 28, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18242A443), Framatome, Inc. (Framatome) submitted Topical Report (TR) ANP-10339P, Revision 0, "ARITA - ARTEMIS/RELAP Integrated Transient Analysis Methodology" (ADAMS Package No. ML18242A480), to the U.S. Nuclear Regulatory Commission (NRC) for review and approval. ANP-10339P, Revision 0 (ARITA) presents a coupled code system and evaluation models for the analysis of pressurized water reactor non-loss-of-coolant accident events identified in NUREG-0800, Chapter 15, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition - Transient and Accident Analysis."

The NRC staff's technical review of this TR is ongoing. The NRC staff will perform a regulatory audit on Wednesday, April 20, 2022, through Thursday, April 21, 2022 and Thursday, April 28, 2022. The NRC staff determined that this regulatory audit is needed to facilitate the review. Previous audits were held on December 7-11, 2020 (ADAMS Package Accession No. ML21026A007), March 3-4 and 25-26, 2021 (ADAMS Package Accession No. ML21055A702), April 22, 2021 (ADAMS Package Accession No. ML21110A149), June 15, 2021 (ADAMS Accession No. ML21159A143), July 9, 2021 (ADAMS Accession No. ML21187A126), August 11-12, 2021 (ADAMS Accession No. ML21204A101), and November 8, 2021 (ADAMS Accession No. ML21309A105). The NRC and Framatome have also held closed meetings on January 13, 2022 (ADAMS Accession No. ML22081A359), February 3, 2022 (ADAMS Accession No. ML22080A157), February 17, 2022 (ADAMS Accession Nos. ML22081A317), March 3, 2022 (ADAMS Accession No. ML22082A262), March 16, 2022 (ADAMS Accession No. ML22080A116), March 31, 2022 (ADAMS Accession No. ML22094A074), April 7, 2022 (ADAMS Accession No. ML22097A315), and April 14, 2022 (ADAMS Accession No. ML22105A414) regarding requests for additional information. Enclosed for your information is a copy of the audit plan the NRC staff will follow.

Please contact Ngola Otto at 301-415-6695 or via e-mail at Ngola.Otto@nrc.gov with any questions you may have regarding this letter.

Sincerely,

/RA/

Richard Chang, Chief
Licensing Projects Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 99902041

Enclosure:
Audit Plan (Non-Proprietary)

REGULATORY AUDIT PLAN FOR FRAMATOME INC.

TOPICAL REPORT ANP-10339P, REVISION 0,

“ARITA – ARTEMIS/RELAP INTEGRATED TRANSIENT ANALYSIS METHODOLOGY”

PROJECT NO. 728; DOCKET NO. 99902041

EPID L-2018-TOP-0034

1.0 BACKGROUND

By letter dated August 28, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18242A443), Framatome, Inc. (Framatome) submitted Topical Report (TR) ANP-10339P, Revision 0, “ARITA - ARTEMIS/RELAP Integrated Transient Analysis Methodology” (ADAMS Package No. ML18242A480) to the U.S. Nuclear Regulatory Commission (NRC) for review and approval for licensing applications. ANP-10339P, Revision 0 (ARITA) presents a coupled code system and evaluation models for the analysis of pressurized water reactor non-loss-of-coolant accident (non-LOCA) events identified in Chapter 15 of NUREG-0800, “Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants” (SRP). In December 2018, the NRC staff completed an acceptance review of the TR and found additional information was necessary (ADAMS Accession No. ML18345A159) before a formal review effort could begin. The necessary supplemental information was submitted by Framatome in March 2019 (ADAMS Accession No. ML19078A253). The NRC staff’s review also relies upon information submitted by Framatome in March 2020, July 2020, November 2020, and June 2021 (ADAMS Accession Nos. ML20097E381, ML20237F458, ML20335A218, and ML21162A080, respectively), in response to request for additional information (RAI) questions from the NRC staff.

The NRC staff has identified that many of Framatome’s RAI responses do not fully address the staff’s concerns. Therefore, the NRC staff conducted regulatory audits in December 2020 (ADAMS Package Accession No. ML21026A007), March 2021 (ADAMS Package Accession No. ML21055A702), April 22, 2021 (ADAMS Package Accession No. ML21110A149), June 15, 2021 (ADAMS Accession No. ML21159A143), and July 9, 2021 (ADAMS Accession No. ML21187A126), August 11-12, 2021 (ADAMS Accession No. ML21204A101), and November 8, 2021 (ADAMS Accession No. ML21309A105) to increase efficiency in the review, facilitate discussion, and close the open items. The NRC staff and Framatome staff concluded that an additional regulatory audit of this nature would further enhance the efficiency of the review. The NRC staff will conduct this audit both in-person and virtual under the guidance provided in LIC-500 (Topical Report Process) and LIC-111 (Regulatory Audits).

2.0 REGULATORY AUDIT BASES

Regulatory guidance for the review of fuel system materials and designs and adherence to Title 10 of the *Code of Federal Regulations*, Appendix A to Part 50, General Design Criteria (GDC)-10, “Reactor Design,” GDC-27, “Combined Reactivity Control Systems Capability,” and GDC-35, “Emergency Core Cooling,” is provided in NUREG-0800, Section 4.2, “Fuel System Design.”

Enclosure

In accordance with SRP Section 4.2, the objectives of the fuel system safety review are to provide reasonable assurance that: (1) the fuel system is not damaged as a result of normal operation and anticipated operational occurrences, (2) fuel system damage is never so severe as to prevent control rod insertion when it is required, (3) the number of fuel rod failures is not underestimated for postulated accidents, and (4) coolability is always maintained.

3.0 REGULATORY AUDIT SCOPE

The NRC staff will conduct a two-day in-person audit at Framatome facility located at 3315 Old Forest Road Lynchburg, VA 24501. The discussions will conclude with a one-day virtual audit using Microsoft Teams on April 28, 2021. This audit is expected to include discussion between the NRC staff and Framatome staff regarding areas of technical disagreement identified, and open items from the RAI responses. Details regarding the discussions and open items are provided below.

4.0 INFORMATION NEEDS

The NRC staff requests that Framatome make available appropriate engineer(s) with knowledge of ARITA and any appropriate references, to address questions by the NRC staff.

Documents referenced in the TR should also be made available.

Discussion Topics

This audit will establish the remaining actions needed for resolution of all unresolved RAI responses before focusing on technical discussions for the closure of as many of these items as time permits. Time will be allotted at the end of the audit for initial proposal of possible limitations and conditions that would resolve any of the open items remaining.

5.0 TEAM ASSIGNMENTS

Kevin Heller, Technical Reviewer (NRR/DSS/SFNB)
John Lehning, Technical Reviewer (NRR/DSS/SFNB)
Robert Lukes, Branch Chief (NRR/DSS/SFNB)
Ngola Otto, Project Manager (NRR/DORL/LLPB)
Richard Chang, Branch Chief (NRR/DORL/LLPB)

6.0 LOGISTICS

Audit Dates: Wednesday, April 20, 2022, through Thursday, April 21, 2022, and Thursday, April 28, 2022.

The audit is scheduled to begin at 9:00 a.m. Eastern Standard Time. Time will be allocated for specific topics during the day of the audit as presented below:

Audit Agenda			
	Wednesday	Thursday	Thursday
AM	Opening discussion on objectives / Identify remaining actions for resolution of all items	Major discussion topics / Closure discussions for open items	Major discussion topics / Closure discussions for open items
PM	Closure discussions for open items	Discuss possible limitations and conditions that would resolve open items / Next steps	Next steps

7.0 **DELIVERABLES**

A regulatory audit summary will be provided within 90 days of the completion of the audit.

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(EPID L-2018-TOP-0034) DATED: APRIL 22, 2022

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Buck.Barner@Framatome.com

ADAMS Accession No.: ML22109A121 (Audit Plan)

OFFICE	NRR/DORL/LLPB/PM	NRR/DORL/LLPB/LA	NRR/DSS/SFNB/BC	NRR/DORL/LLPB/BC
NAME	NOtto	DHarrison	RLukes	RChang
DATE	4/19/2022	4/21/2022	4/21/2022	4/22/2022

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