



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

March 15, 2021

Mr. Victor Montalbano, Vice-President
Quality and Performance
Framatome Inc.
3315 Old Forest Road
Lynchburg, VA 24501

SUBJECT: NUCLEAR REGULATORY COMMISSION VENDOR INSPECTION REPORT OF
FRAMATOME INC., NO. 99901300/2021-001

Dear Mr. Montalbano:

From February 22 through February 25, 2021, the U.S. Nuclear Regulatory Commission (NRC) staff conducted a limited-scope virtual inspection of Framatome Inc. (hereafter referred to as Framatome), located in Lynchburg, VA. The purpose of this limited-scope virtual inspection was to assess Framatome's compliance with provisions of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 21, "Reporting of Defects and Noncompliance," and selected portions of Appendix B, "Quality Assurance Program Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities."

This technically-focused virtual inspection specifically evaluated Framatome's implementation of the quality activities associated with: (1) the development of new interim safety limits associated with the Barnett and Biasi correlations used to predict the critical heat flux to confirm the new values ensure the 95/95 acceptance criteria is satisfied; (2) supplier oversight, and (3) corrective action. The enclosed report presents the results of the inspection. This NRC inspection report does not constitute NRC endorsement of Framatome's overall quality assurance (QA) or 10 CFR Part 21 programs.

Based on the results of this inspection, the NRC inspection team found the implementation of your QA program met the applicable technical and regulatory requirements imposed on you by your customers or NRC licensees. No findings of significance were identified.

In accordance with 10 CFR 2.390, "Public inspections, exemptions, requests for withholding," of the NRC's "Rules of Practice," a copy of this letter and its enclosure(s) will be made electronically available for public inspection in the NRC's Public Document Room and from the NRC's Agencywide Documents Access and Management System, accessible from the NRC's Web site at <http://www.nrc.gov/reading-rm/adams.html>.

If you have any questions concerning this matter, please contact Mr. Yamir Diaz-Castillo of my staff at (301) 415-2228.

Sincerely,

Kerri A. Kavanagh, Chief **/RA/**
Quality Assurance and Vendor Inspection Branch
Division of Reactor Oversight
Office of Nuclear Reactor Regulation

Docket No.: 99901300

EPID No.: I-2021-001-0112

Enclosure:

1. Inspection Report No. 99901300/2021-001
and Attachment

SUBJECT: NUCLEAR REGULATORY COMMISSION'S VENDOR INSPECTION REPORT
OF FRAMATOME INC., NO. 99901300/2021-001 Dated: March 15, 2021

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ADAMS Accession No.: ML21069A303

NRR-106

OFFICE	NRR/DSS/SNSB	NRR/DSS/SFNB	NRR/DSS/SNSB
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DATE	03/10/2021	03/09/2021	03/10/2021
OFFICE	NRR/DRO/IQVB	NRR/DRO/IQVB	NRR/DRO/IQVB
NAME	YLaw	YDiaz-Castillo	KKavanagh
DATE	03/09/2021	03/10/2021	03/15/2021

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**U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
DIVISION OF REACTOR OVERSIGHT
QUALITY ASSURANCE AND VENDOR INSPECTION REPORT**

Docket No.: 99901300

Report No.: 99901300/2021-001

Vendor: Framatome Inc.
3315 Old Forest Road
Lynchburg, VA 24501

Vendor Contact: Mr. Victor Montalbano
Vice-President, Quality and Performance
Email: victor.montalbano@framatome.com
Phone: 434-832-3368

Nuclear Industry Activity: Framatome, Inc.'s scope of supply includes fuel design and fabrication, engineering services, and replacement of safety-related components for U.S. nuclear power plants.

Inspection Dates: February 22 - 25, 2021 (virtual)

Inspectors:	Yamir Diaz-Castillo	NRR/DRO/IQVB	Team Leader
	Yiu Law	NRR/DRO/IQVB	

Technical Specialists:	Joshua Kaizer	NRR/DSS/SFNB	
	John Grasso	NRR/DSS/SNSB	Trainee
	Adam Rau	NRR/DSS/SNSB	Trainee

Approved by: Kerri A. Kavanagh, Chief
Quality Assurance and Vendor Inspection Branch
Division of Reactor Oversight
Office of Nuclear Reactor Regulation

Enclosure

EXECUTIVE SUMMARY

Framatome, Inc.
99901300/2021-001

From February 22 through February 25, 2021, the U.S. Nuclear Regulatory Commission (NRC) staff conducted a limited-scope virtual inspection of Framatome, Inc.'s (hereafter referred to as Framatome) facility located in Lynchburg, VA. The purpose of this limited-scope virtual inspection was to assess Framatome's compliance with provisions of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 21, "Reporting of Defects and Noncompliance," and selected portions of Appendix B, "Quality Assurance Program Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities." This was the seventh NRC inspection of the Lynchburg, VA facility. The last inspection to this facility occurred in March 2020 and a copy of the inspection report can be found under the Agencywide Documents Access and Management System Accession (ADAMS) No. ML20083H560. This inspection was performed virtually due to the ongoing worldwide pandemic associated with the novel Coronavirus.

This technically-focused virtual inspection specifically evaluated Framatome's implementation of the quality activities associated with: (1) the development of the new interim safety limits associated with the Barnett and Biasi correlations used to predict the critical heat flux (CHF) to confirm the new values ensure the 95/95 acceptance criteria is satisfied; (2) supplier oversight; and (3) corrective action.

These regulations served as the bases for the NRC inspection:

- Appendix B to 10 CFR Part 50
- 10 CFR Part 21

During the course of this virtual inspection, the NRC inspection team implemented portions of Inspection Procedure (IP) 36100, "Inspection of 10 CFR Part 21 and Programs for Reporting Defects and Noncompliance," dated May 16, 2019, IP 43002, "Routine Inspections of Nuclear Vendors," dated January 27, 2017, and IP 43004, "Inspection of Commercial-Grade Dedication Programs," dated January 27, 2017.

The results of the inspection are summarized below.

10 CFR Part 21

The NRC inspection team reviewed Framatome's policies and implementing procedures that govern the implementation of its 10 CFR Part 21 program to verify compliance with 10 CFR Part 21. The NRC inspection team: (1) reviewed a sample of purchase orders (POs); (2) verified that Framatome's corrective action program provide a link to the 10 CFR Part 21 program, and (3) reviewed a sample of 10 CFR Part 21 evaluations. No findings of significance were identified.

Design Control

The NRC inspection team reviewed Framatome's policies and implementing procedures that govern the implementation of its design control program to verify compliance with the requirements of Criterion III, "Design Control," of Appendix B to 10 CFR Part 50. The NRC

inspection team reviewed Framatome's development of a departure from nucleate boiling ratio (DNBR) interim design basis limit for the Biasi and modified Barnett CHF correlations. The NRC inspection team reviewed conditions reports (CRs), design analysis documents, and engineering information reports that described how the limits were generated. The NRC inspection team verified that when applied with the interim design basis limits, the Biasi and modified Barnett CHF correlations are technically adequate for demonstrating compliance with the 95/95 acceptance criterion for DNBR. No findings of significance were identified.

Supplier Oversight

The NRC inspection team reviewed Framatome's policies and implementing procedures that govern the implementation of its supplier oversight program to verify compliance with the requirements of Criterion IV, "Procurement Document Control," and Criterion VII, "Control of Purchased Material, Equipment, and Services," of Appendix B to 10 CFR Part 50. The NRC inspection team reviewed a sample of POs and confirmed the POs contained the applicable technical and regulatory requirements. In addition, the NRC inspection team reviewed a sample of external audit reports and confirmed the external audits were performed by qualified individuals using checklists and/or procedures, the checklists and/or procedures included an audit plan, documented objective evidence, audit results, and a review of audit results by responsible management. No findings of significance were identified.

Corrective Action

The NRC inspection team reviewed Framatome's policies and implementing procedures that govern the implementation of its corrective action program to verify compliance with the requirements of Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50. The NRC inspection team also reviewed a sample of CRs and confirmed the CRs were adequately reviewed, implemented, and approved by appropriate personnel in a timely manner. In addition, the NRC inspection team reviewed the implementation and closure of CR 2019-2815 and CR 2019-2817 initiated during the June 2019 NRC inspection of Framatome (ADAMS Accession No. ML19261A188). No findings of significance were identified.

REPORT DETAILS

1. 10 CFR Part 21 Program

a. Inspection Scope

The Nuclear Regulatory Commission (NRC) inspection team reviewed Framatome, Inc.'s (hereafter referred to as Framatome) policies and implementing procedures that govern the implementation of its Title 10 of the *Code of Federal Regulations* (10 CFR) Part 21, "Reporting of Defects and Noncompliance," program to verify compliance with the regulatory requirements. In addition, the NRC inspection team evaluated a sample of Framatome's purchase orders (POs) for compliance with the requirements of 10 CFR 21.21, "Notification of Failure to Comply or Existence of a Defect and its Evaluation," and 10 CFR 21.31, "Procurement Documents." The NRC inspection team also verified that Framatome's corrective action procedures provide a link to the 10 CFR Part 21 program. Furthermore, for a sample of 10 CFR Part 21 evaluations performed by Framatome, the NRC inspection team verified that Framatome had effectively implemented the requirements for evaluating deviations and failures to comply. The NRC inspection team verified that the notifications were performed in accordance with the requirements of 10 CFR 21.21, as applicable.

The NRC inspection team also discussed the 10 CFR Part 21 program with Framatome's management and technical staff. The attachment to this inspection report lists the documents reviewed and personnel interviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team concluded that Framatome is implementing its 10 CFR Part 21 program in accordance with the regulatory requirements of 10 CFR Part 21. Based on the limited sample of documents reviewed, the NRC inspection team also determined that Framatome is implementing its policies and procedures associated with the 10 CFR Part 21 program. No findings of significance were identified.

2. Design Control

a. Inspection Scope

The NRC inspection team reviewed Framatome's development of a departure from nucleate boiling (DNBR) interim design basis limits for the Biasi and modified Barnett critical heat flux (CHF) correlations to verify compliance with the regulatory requirements of Criterion III, "Design Control," of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities." The NRC inspection team focused its inspection on the calculations used to develop and validate the interim design basis limits.

The NRC inspection team reviewed conditions reports (CRs), design analysis documents, and engineering information reports, as well as interviewed cognizant

engineers and management associated with the identification, analysis, and resolution of the non-conservative design limits for the Biasi and modified Barnett CHF correlations.

The NRC inspection team also discussed the design control program with Framatome's management and technical staff. The attachment to this inspection report lists the documents reviewed and personnel interviewed by the NRC inspection team.

b. Observations and Findings

In 2019, the NRC staff became aware of a non-conservatism in the Biasi and modified Barnett CHF correlations. These correlations are used to demonstrate compliance with the 95/95 acceptance criterion for DNBR. This non-conservatism was identified when the correlation's predictions were compared against recent experimental data. This comparison showed that both correlations resulted in non-conservative predictions of DNBR under certain operating conditions. After identifying this issue, Framatome initiated several CRs and developed an interim DNBR design basis limit for each correlation based on the new test data. The purpose of the interim limits was to ensure that both the Biasi and modified Barnett CHF correlations could still satisfy the 95/95 acceptance criterion for DNBR. In addition, Framatome performed several evaluations under 10 CFR Part 21 as a result of the non-conservatism.

The Biasi and modified Barnett correlations are open literature CHF correlations developed on experimental data from the 1960's and 1970's. The NRC staff approved the use of these correlations with DNBR design basis limits calculated from the experimental data which was used to generate each correlation. The calculations assumed the physical behavior observed in the experiment was applicable to the physical behavior of the nuclear fuel on which the correlations would be applied. However, while responding to question from a licensee, Framatome discovered that this assumption was not true under certain conditions and that the Biasi and modified Barnett correlations would non-conservatively predict the CHF behavior.

Framatome developed interim safety limits for the Biasi and modified Barnett correlations based on newer experimental data. Framatome proceeded to apply the interim safety limits and compared the Biasi and modified Barnett predictions of CHF to new experimental data. For each data point in the domain, Framatome compared the predicted value of CHF to the measured value and determined that there was a high degree of confidence the CHF correlations (when applied with interim safety limits) could be used to demonstrate that the 95/95 acceptance criterion for DNBR has been satisfied. The NRC inspection team evaluated the comparison to experimental data and found that the interim design basis limits were more conservative than the actual 95/95 statistic from the measured-to-predicted data. For the application of the Biasi CHF correlation, the NRC inspection team identified subregions in which the correlation may have slightly non-conservative behavior. The presence of these sub-regions is to be expected in any high-dimensional correlation. The NRC inspection team concluded that for the potentially non-conservative sub-regions reviewed, these non-conservative sub-regions would have a minor impact and would likely be offset with other conservatisms associated with the application of the Biasi CHF correlation. For the application of the modified Barnett CHF correlation, the NRC inspection team did not identify any subregions of non-conservative behavior.

The NRC inspection team also evaluated the engineering information report that describes the main steam line break analysis and confirmed the report directed the analysts to use the interim design basis safety limits, as opposed to using the non-conservative design basis safety limits in the Biasi and modified Barnett correlations documentation. In addition, the NRC inspection team verified that all the corrective actions listed in the CRs opened to address this issue were adequately implemented. Furthermore, the NRC inspection team verified that the 10 CFR Part 21 evaluations initiated as a result of this issue were adequately performed.

c. Conclusion

The NRC inspection team concluded that Framatome is implementing its design control program in accordance with the regulatory requirements of Criterion III of Appendix B to 10 CFR Part 50. Specifically, the NRC inspection team concluded that the interim design basis limits, when applied with the Biasi and modified Barnett CHF correlations, are technically adequate for demonstrating compliance with the 95/95 acceptance criterion for DNBR. Based on the limited sample of documents reviewed, the NRC inspection team also determined that Framatome is implementing its policies and procedures associated with the design control program. No findings of significance were identified.

3. Supplier Oversight

a. Inspection Scope

The NRC inspection team reviewed Framatome's policies and implementing procedures that govern the implementation of its supplier oversight program to verify compliance with the requirements of Criterion IV, "Procurement Document Control," and Criterion VII, "Control of Purchased Equipment, Materials, and Services," of Appendix B to 10 CFR Part 50.

The NRC inspection team reviewed a sample of external audit reports and POs from suppliers on Framatome's Approved Suppliers List (ASL). For the sample of external audit reports reviewed, the NRC inspection team verified the external audit reports included an audit plan, any findings identified, adequately documented objective evidence of compliance with the applicable requirements, and a review by responsible management. In addition, the NRC inspection team also verified the external audits were performed by a qualified lead auditor. Furthermore, the NRC inspection team reviewed a sample of training and qualification records of Framatome's lead auditors and confirmed that lead auditing personnel had completed all the required training and qualification in accordance with Framatome's procedures. The NRC inspection team verified that Framatome prepared and approved audit plans that identified the audit scope and applicable checklist criteria before the initiation of the external audit activity. The NRC inspection team confirmed the external audit reports contained objective evidence of the review of the relevant quality assurance (QA) criteria of Appendix B to 10 CFR Part 50.

The NRC inspection team also noted that Framatome performs commercial-grade dedication of calibration and testing services in accordance with the conditions imposed on the NRC's approval of the International Laboratory Accreditation Cooperation accreditation process documented in a safety evaluation report dated

February 9, 2015 (Agencywide Documents Access and Management System Accession No. ML14322A535). The NRC inspection team confirmed that: (1) a documented review of the suppliers' accreditation scope was performed; (2) the POs contained the appropriate technical and quality requirements; and (3) a documented review of the calibration or testing service was performed during receipt inspection to ensure the POs requirements were met.

The NRC inspection team also discussed the design control program with Framatome's management and technical staff. The attachment to this inspection report lists the documents reviewed and personnel interviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team concluded that Framatome is implementing its supplier oversight program in accordance with the regulatory requirements of Criterion IV and Criterion VII of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team also determined that Framatome is implementing its policies and procedures associated with the supplier oversight program. No findings of significance were identified.

4. Corrective Action

a. Inspection Scope

The NRC inspection team reviewed Framatome's policies and implementing procedures that govern the implementation of its corrective action program to verify compliance with the requirements of Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50.

The NRC inspection team reviewed a sample of CRs to ensure that conditions adverse to quality were promptly identified and corrected. The NRC inspection team verified the CRs provided: (1) adequate documentation and description of conditions adverse to quality, (2) an appropriate analysis of the cause of these conditions and the corrective actions taken to prevent recurrence, as applicable, (3) direction for review and approval by the responsible authority, (4) a description of the current status of the corrective actions, and (5) the follow-up actions taken to verify timely and effective implementation of the corrective actions. In addition, the NRC inspection team verified that the CRs provide a link to the 10 CFR Part 21 program.

The NRC inspection team also discussed the corrective program with Framatome's management and technical staff. The attachment to this inspection report lists the documents reviewed and personnel interviewed by the NRC inspection team.

b. Observations and Findings

During an NRC inspection of Framatome on June 2019, the NRC inspection team noted that the language used in the 10 CFR Part 21 procedure could potentially result in an unintentional reset of the 60-day clock requirement for performing a 10 CFR Part 21

evaluation. Framatome initiated CR 2019-2815 to address this issue. The NRC inspection team verified that Framatome revised the 10 CFR Part 21 procedure to remove the language and concluded that Framatome took appropriate action to close this CR.

The NRC inspection team also reviewed CR 2019-2817, initiated by Framatome as a result of the June 2019 NRC inspection, to address the use of thumb drives on computers used to handle and store Safeguards Information (SGI) and the methods for restricting access to only approved Universal Serial Bus (USB) devices on SGI computers. The NRC inspection team verified that Framatome evaluated its SGI program and determined that there was already a measure in place to ensure that only approved USB devices are recognized on SGI computers. The NRC inspection team reviewed the documentation and concluded that Framatome took the appropriate action to close this CR.

c. Conclusion

The NRC inspection team concluded that Framatome is implementing its corrective action program in accordance with the regulatory requirements of Criterion XVI of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team also determined that Framatome is implementing its policies and procedures associated with the corrective action program. No findings of significance were identified.

5. Entrance and Exit Meetings

On February 22, 2021, the NRC inspection team discussed the scope of the inspection with Mr. Victor Montalbano, Vice-President, Quality and Performance, and other members of Framatome's management and technical staff. On February 25, 2021, the NRC inspection team presented the inspection results and observations during an exit meeting with Mr. Montalbano and other members of Framatome's management and technical staff. The attachment to this report lists the attendees of the entrance and exit meetings, as well as those individuals whom the NRC inspection team interviewed.

ATTACHMENT

1. ENTRANCE/EXIT MEETING ATTENDEES

Name	Title	Affiliation	Entrance	Exit	Interviewed
Victor Montalbano	Vice-President, Quality and Performance	Framatome	X	X	
Robert Freeman	Vice-President, Contracts and Services, North America, Fuel Commercial and Customer Center	Framatome	X		
Steven Lydzinski	Vice-President, Fuel Design Engineering - North America	Framatome	X		
Mark Harvey	Instrumentation and Control Business Unit (ICBU) North America, Director of Quality and Independent Validation and Verification	Framatome	X		
Gayle Elliott	Deputy Director, Licensing and Regulatory Affairs	Framatome	X		X
Paul García	Manager, Management System and Continuous Improvement (MS&CI)	Framatome	X	X	X
Brian Haibach	Manager, Fuel Core Design and Safety Analysis - Pressurized Water Reactor	Framatome	X		X
Pat McQuade	Manager, Corrective Action Program - US Fuel	Framatome	X	X	X
Craig Chiodo	Manager, Corrective Action Program - Installed Base	Framatome	X	X	X

Name	Title	Affiliation	Entrance	Exit	Interviewed
Richie McKay	ICBU North America, Manager, Corrective Action Program	Framatome	X	X	X
Duane Newman	Manager, Quality Programs	Framatome	X	X	X
Charlie Holman	Operational Quality Manager	Framatome			X
John Adams	Supervisor, Westinghouse/ Combustion Engineering Core Thermal Hydraulics	Framatome	X	X	X
Marc Dziuba	Principal Engineering, Fuel Core Design and Safety Analysis - Pressurized Water Reactor	Framatome	X	X	X
Jerald Holm	Licensing Engineer	Framatome	X	X	X
Philip Opsal	Licensing Technical Consultant	Framatome	X	X	
Yamir Diaz-Castillo	Inspection Team Leader	Nuclear Regulatory Commission (NRC)	X	X	
Yiu Law	Inspector	NRC	X	X	
Joshua Kaizer	Technical Specialist	NRC	X	X	
John Grasso	Technical Specialist	NRC	X	X	
Adam Rau	Technical Specialist	NRC	X	X	
Paul Prescott	Acting Branch Chief	NRC	X	X	

2. INSPECTION PROCEDURES USED

- Inspection Procedure (IP) 36100, "Inspection of 10 CFR Part 21 and Programs for Reporting Defects and Noncompliance," dated May 16, 2019
- IP 43002, "Routine Inspections of Nuclear Vendors," dated January 27, 2017

- IP 43004, "Inspection of Commercial-Grade Dedication Programs," dated January 27, 2017

3. DOCUMENTS REVIEWED

Policies and Procedures

- Administrative Procedure No. 1707-01, "Implementation of 10 CFR 21," Revision 53, dated January 29, 2020
- Administrative Procedure No. 1719-23, "Qualification of Quality Assurance Audit Personnel," Revision 29, dated February 20, 2019
- Corporate Policy No. 0401, "Evaluation and Reporting per 10 CFR 21," Revision 25, dated July 31, 2018
- D02-ARV-01-101-817, "Framatome Integrated Management System Manual," Revision F, dated August 24, 2020
- Form No. 0412-75-F02, "CGD Statement of Acceptability for Calibration Services from an ISO/IEC 17025:2005 or ISO/IEC 17025:2017 Accredited Supplier," Revision 4, dated May 15, 2019
- Form No. 0412-75-F03, "CGD Statement of Acceptability for Laboratory Test Services from an ISO/IEC 17025:2005 or ISO/IEC 17025:2017 Accredited Supplier," Revision 2, dated May 15, 2019
- FS1-0022922, "Dedication Plan for Commercial Grade Calibration Services of M&TE," Revision 2, dated June 4, 2019
- FS1-0023122, "Commercial Grade Dedication Plan for Laboratory Testing Services," Revision 2, dated May 10, 2019
- Fuel Standard Operating Procedure (FSOP)-07, "Design Analysis," Revision 8, dated October 1, 2020
- FSOP-15, "Assessment of Suppliers," Revision 7, dated January 1, 2020
- Operating Instruction No. 2A826-1197, "Receiving Quality Related, Safety Related, and ASME Code Items for Contract/Inventory," Revision 34, dated January 29, 2021
- Procedure No. 0412-75, "Dedication of Commercial Grade Items and Services," Revision 20, dated December 4, 2019
- Procedure No. 1212-34, "Preparation of Safety Related Purchase Authorization Requests for Non-Inventory Items and/or Services," Revision 2, dated November 19, 2019
- Procedure No. 1212-35, "Quality Procurement Clauses," Revision 3, dated June 11, 2019

- Procedure No. 1703-88, "US Fuel Corrective Action Program (Devonway ICAP)," Revision 1, dated March 3, 2020
- Procedure No. 1719-22, "Quality Assurance Audits and Commercial Grade Surveys of Suppliers," Revision 38, dated December 4, 2020
- Procedure No. 1719-39, "US Fuel Supplier Audits," Revision 10, dated February 3, 2020
- Procedure No. 1719-39, "US Fuel Supplier Audits," Revision 11, dated February 8, 2021
- Quality Assurance Procedure (QAP)-04, "Design Control," Revision 7, dated March 1, 2018
- QAP-06, "Purchasing," Revision 12, dated May 24, 2018
- QAP-13, "Control of Nonconforming Product and Corrective Action," Revision 12, dated February 3, 2020
- QAP-17, "Audits," Revision 8, dated January 31, 2020
- Quality Control-1466, "Us Fuel Supplier Selection/Qualification Process," Revision 11, dated January 31, 2020

Design Control Records

- FS1-0037582, "Calc - Design Limits for the Biasi CHF Correlation for HTP Bundles," Revision 2, dated November 10, 2020
- FS1-0040277, "Investigation on the Validity of Modified Barnett Applied to HTP Fuel," Revision 3, dated January 21, 2020
- FS1- FS1-0042425, "Biasi CHF Correlation Geometry Correction Factor," Revision 1, dated February 19, 2019
- FS1-0045036, "Millstone-Requested Information on the Biasi and Modified Barnett CHF Correlations," Revision 1, dated August 30, 2019
- FS1-0046225, "Evaluation of Subchannel Fluid Properties on the Biasi DNB Design Limit," Revision 2, dated February 24, 2020
- FS1-0010447, "PWR Engineering Guideline for Main Steam Line Break Thermal-Hydraulic Analysis," Revision 1, dated September 27, 2019
- Power Point presentation by Framatome on "Overview of Biasi and Modified Barnett", dated February 2021

Audit Reports, Calibration Certificates, Commercial-Grade Dedication of Calibration and Testing Services Documentation, and Purchase Orders

- Framatome's Fuel Approved Suppliers List

- 9 Month Extension Review for a supplier of electric motors, generators, and refurbishment services, dated September 28, 2020
- Annual Supplier Evaluation Survey for a supplier of heat treatment, laser welding, cleaning, and liquid penetrant inspection services, dated November 30, 2020
- Annual Supplier Evaluation Survey for a supplier of heat treatment, and non-destructive testing services, dated February 8, 2021
- Annual Supplier Evaluation Survey for a Supplier of coil springs, dated November 30, 2020
- Accredited Supplier Acceptance Assessment No. 19-48 for a testing laboratory, dated May 30, 2019
- Accredited Supplier Acceptance Assessment No. 19-67 for a calibration laboratory, dated July 26, 2019
- Audit Report No. 18-71 for a supplier of testing services, audit performed September 11-13, 2018
- Audit Report No. 20-04 for a supplier of upper and lower absorbers, audit performed December 7-8, 2020
- Audit Report No. 19-91 for a supplier of testing services, audit performed on September 10-13, 2019
- Audit Report No. 19-100 for a supplier of non-destructive testing services, audit performed on November 18-20, 2019
- Audit Report No. 20-05 for a supplier of castings, audit performed on August 11-13, 2020
- Audit Report No. 20-07 for a supplier of Inconel strip material, audit performed on October 13-16, 2020
- Audit Report No. 20-08 for a supplier of castings, audit performed on August 4-6, 2020
- Certificate of Calibration No. 1242019638877 for a coordinate measuring machine, dated December 4, 2019
- Certified Test Report No. All075-17-12-46790-1 for chemical analysis of Gadolinia powder, dated December 18, 2017
- Commercial-Grade Dedication (CGD) Statement of Acceptability for Calibration Services from an ISO/IEC 17025:2005 or ISO/IEC 17025:2017 Accredited Supplier for calibration of gage No. 026-0001, dated December 6, 2019

- CGD Statement of Acceptability for Laboratory Test Services from an ISO/IEC 17025:2005 or ISO/IEC 17025:2017 Accredited Supplier for testing of Gadolinia powder, dated January 10, 2018
- Purchase Order (PO) No. 1018059755 for hot cell testing services, Revision 0, dated December 21, 2018
- PO No. 1020004114 for upper and lower absorbers, Revision 0, dated January 27, 2020
- PO No. 1019047863 for calibration services, Revision 0, dated October 25, 2019
- PO No. 1017063859 for testing services, Revision 0, dated November 28, 2017
- PO No. 1019044882 for non-destructive testing services, Revision 2, dated December 15, 2019
- PO No. 1019016727 for testing services, Revision 0, dated April 1, 2019
- PO No. 1020006978 for castings, Revision 1, dated March 25, 2020
- PO No. 1019024338 for castings, Revision 1, dated July 19, 2019
- PO No. 1020006220 for Inconel strip material , Revision 0, dated February 7, 2020

Condition Reports

- Condition Report (CR) 2018-2905
- CR 2018-3125
- CR 2018-8792
- CR 2018-8796
- CR 2018-10211
- CR 2019-2458
- CR 2019-2815
- CR 2019-2817
- CR 2019-3694
- CR 2020-0618
- CR 2020-0975
- CR 2020-1465
- CR 2020-1599
- CR 2020-2389
- CR 2020-2513
- CR 2021-0260
- CR 2021-0361

Training and Qualification

- CERT-QAL-450004, "Lead Auditor Annual Recertification Record," for Paul Garcia and Jaime Castaneda