



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

May 9, 2023

Mr. Stanley Griffin
Nuclear Programs Quality Leader
Global Nuclear Fuel – Americas, LLC
3301 Castle Hayne Road
Wilmington,

SUBJECT: GLOBAL NUCLEAR FUEL - AMERICAS, LLC'S NUCLEAR REGULATORY
COMMISSION INSPECTION REPORT NO. 99901376/2023-201 AND NOTICE
OF NONCONFORMANCE

Dear Mr. Griffin:

On March 20 through March 24, 2023, the U.S. Nuclear Regulatory Commission (NRC) staff conducted an inspection at Global Nuclear Fuel – Americas, LLC (hereafter referred to as GNF-A) facility in Wilmington, NC. The purpose of this limited-scope routine inspection was to assess GNF-A'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 inspection specifically evaluated GNF-A's implementation of the quality activities associated with the supply of safety-related fuel design and fabrication for U.S. nuclear power plants. The enclosed report presents the results of the inspection. This NRC inspection report does not constitute NRC endorsement of GNF-A's overall quality assurance (QA) or 10 CFR Part 21 programs.

Based on the results of this inspection, the NRC inspection team found that the implementation of your QA program failed to meet certain NRC requirements imposed on you by your customers or NRC licensees. Specifically, the NRC inspection team determined that GNF-A was not fully implementing its QA program in the areas of inspections and audits. The specific findings and references to the pertinent requirements are identified in the enclosures to this letter. In response to the enclosed notice of nonconformance (NON), GNF-A should document the results of the extent of condition review for these findings and determine if there are any effects on other safety-related components.

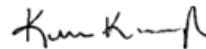
Please provide a written statement or explanation within 30 days from the date of this letter in accordance with the instructions specified in the enclosed NON. We will consider extending the response time if you show good cause for us to do so.

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, its enclosure(s), and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible at <http://www.nrc.gov/reading->

rm/adams.html. To the extent possible, your response (if applicable), should not include any personal privacy, proprietary, or Safeguards Information (SGI) so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request that such material be withheld from public disclosure, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim (e.g., explain why the disclosure of information would create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information).

If SGI is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21, "Protection of Safeguards Information: Performance Requirements."

Sincerely,



Signed by Kavanagh, Kerri
on 05/09/23

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

Docket No.: 99901376

EPID No.: I-2023-201-0011

Enclosures:

1. Notice of Nonconformance
2. Inspection Report No. 99901376/2023-201
and Attachment

SUBJECT: GLOBAL NUCLEAR FUEL - AMERICAS, LLC'S NUCLEAR REGULATORY
 COMMISSION INSPECTION REPORT NO. 99901376/2023-201 AND NOTICE OF
 NONCONFORMANCE DATE: May 9, 2023

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NOTICE OF NONCONFORMANCE

Global Nuclear Fuel - Americas
3901 Castle Hayne Road
Wilmington, NC 28402

Docket No. 99901376
Report No. 99901376/2023-201

Based on the results of a U.S. Nuclear Regulatory Commission (NRC) inspection conducted at the Global Nuclear Fuel – Americas, LLC (hereafter referred to as GNF-A) facility in Wilmington, North Carolina, from March 20, 2023, through March 24, 2023, GNF-A did not conduct certain activities in accordance with NRC requirements that were contractually imposed on GNF-A by its customers or NRC licensees:

- A. Criterion X, “Inspection,” of Appendix B, “Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants,” to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, “Domestic Licensing of Production and Utilization Facilities,” states, in part, that “inspections shall be performed by individuals other than those who performed the activity being inspected.”

Requirement 10, “Inspection,” of NQA-1-2015, “Quality Assurance Requirements for Nuclear Facility Applications,” states, in part, that, “[c]haracteristics subject to inspection and inspection methods shall be specified. Inspection results shall be documented. Inspection for acceptance shall be performed by qualified persons other than those who performed or directly supervised the work being inspected.”

Section 10.1 of GNF-A NEDO-11209-A, “GE Hitachi Nuclear Energy Quality Assurance Program Description,” Revision 17, states that “[i]nspections are performed by independent personnel who have not performed the work and do not report to the supervisors responsible for the work being inspected.”

Contrary to the above, from March 1, 2021, through August 1, 2022, GNF-A failed to ensure that inspections were performed by individuals who do not report to the supervisors responsible for the work being inspected. Specifically, GNF-A changed CAA Temporary Operating Procedure, TOP-50075, Revisions 0 and 1, “QATS Bundle-Rods Table Inspections,” which removed the requirement for Quality Inspectors to perform quality inspection activities, such as confirming the proper orientation of the water rod. This resulted in the inspection of the water rod’s proper orientation by shop operations personnel who shared the same first line supervisor and contributed to several water control rods having an incorrect orientation that were not identified by the shop operations personnel.

This issue has been identified as Nonconformance 99901376/2023-201-01.

- B. Criterion XVIII “Audits,” of Appendix B to 10 CFR Part 50 states, in part, that “[a] comprehensive system of planned and periodic audits shall be carried out to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program.”

NEDO-11209-A, Revision 17, Section 18.1.1 states, “[t]he GE Hitachi Nuclear Energy (GEH) audit program is designed to verify compliance to quality

Enclosure

assurance program requirements, to verify that performance criteria are met, to determine the effectiveness of the program, and to provide a comprehensive independent evaluation of activities and procedures.”

NEDO-11209-A, Revision 17, Section 18.3.1.2 identifies requirements for internal audits scheduling in which the audit intervals are dependent upon whether the activities are for a licensed facility. Specifically, Section 18.3.1.2.b states “[a]ll applicable quality assurance program elements for each functional area shall be audited within a period of two years...the period may be extended one year at a time...based on the results of an annual evaluation...” Section 18.3.1.2.c states, “[a]ctivities not related to a licensed facility or other support activities - All applicable quality assurance program elements shall be audited at least once each year...This interval may be extended up to two years based on the results of an annual evaluation and objective evidence that the activities are being satisfactorily accomplished in accordance with the applicable quality assurance program elements.”

CP-18-100, Revision 11.0, “Quality Assurance Internal Audit,” defines the Internal Quality Assurance Program requirements for audits performed at and by GNF-A. Section 4.1.2 of CP-18-100 states, “Ensure that the organization’s QA program is audited at least every two (2) years for the applicable 18 Criteria of 10 CFR 50 Appendix B...” Section 4.1.6.3 of CP-18-100 requires scheduling of supplemental audits, “[w]hen it is suspected that the quality of an item is in jeopardy due to deficiencies in the QA program.

Contrary to the above, GNF-A failed to implement a comprehensive system of planned and periodic audits to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program.

Specifically,

- GNF-A did not adequately translate the requirement (i.e., the audit interval requirements and performance of an annual evaluation when the internal audit interval is extended beyond the specified time period) in Sections 18.3.1.2.b and c of NEDO-11209-A into its internal audit procedure CP-18-100. As a result, GNF-A did not perform an annual evaluation of its Fuel Manufacturing Organization (FMO) – Bundle Assembly when an internal audit of FMO – Bundle Assembly was not performed in 2022.
- GNF-A did not conduct supplemental audits of FMO – Bundle Assembly, as required by Section 4.1.6.3 of CP-18-100, when conditions indicate that the quality of an item is in jeopardy due to deficiencies in the QA program. Specifically, Condition Report (CR) 38307 was initiated in November 2021, and CRs 38729 and 38740 were initiated in February 2022, documenting issues identified that were attributed to human performance issues within FMO that created conditions adverse to

quality. However, GNF-A did not schedule a supplement audit of FMO and as a result, deficiencies in inspections during the bundle manufacturing process rendered the quality of assembled fuel bundles to be unacceptable or indeterminate after delivery of the product to NRC Licensees.

This issue has been identified as Nonconformance 99901376/2023-201-02.

Please provide a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Chief, Quality Assurance and Vendor Inspection Branch, Division of Reactor Oversight, Office of Nuclear Reactor Regulation, within 30 days of the date of the letter transmitting this Notice of Nonconformance. This reply should be clearly marked as a "Reply to a Notice of Nonconformance" and should include for each noncompliance: (1) the reason for the noncompliance or, if contested, the basis for disputing the noncompliance; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken to avoid further noncompliance; and (4) the date when the corrective action will be completed. Where good cause is shown, the NRC will consider extending the response time.

In accordance with the requirements of 10 CFR 2.390, "Public inspections, exemptions, requests for withholding," of the NRC's "Rule of Practice," your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information.

If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21, "Protection of safeguards information: performance requirements."

Dated this 9th day of May 2023.

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

Docket No.: 99901376

Report No.: 99901376/2023-201

Vendor: Global Nuclear Fuel – Americas LLC
3901 Castle Hayne Road
Wilmington, NC 28402

Vendor Contact: Mr. Stanley Griffin
Nuclear Programs Quality Leader
GE Hitachi Nuclear Energy
Email: Stanley.Griffin@ge.com
Phone: (910) 616-4019

Nuclear Industry Activity: Global Nuclear Fuel – Americas, LLC manufactures uranium dioxide powder, pellets, and light water reactor fuel bundles at its Wilmington, NC facility. The facility converts uranium hexafluoride (UF6) to UO2 using a dry conversion process and performs UO2, gadolinium pellet, and fuel fabrication operations.

Inspection Dates: March 20 - 24, 2023

Inspectors:

Andrea Keim	NRR/DRO/IQVB	Team Leader
Deanna Zhang	NRR/DRO/IQVB	Inspector
Dong Park	NRR/DRO/IQVB	Inspector
Eva Brown	NRR/DRO/IQVB	Inspector (Trainee)
Joshua Kaizer	NRR/DSS/SFNB	Technical Expert

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

EXECUTIVE SUMMARY

Global Nuclear Fuel - Americas
99901376/2023-201

The U.S. Nuclear Regulatory Commission (NRC) staff conducted a limited scope routine vendor inspection at the Global Nuclear Fuel - Americas (hereafter referred to as GNF-A) facility in Wilmington, NC, to verify that it had implemented an adequate quality assurance (QA) program that complies with the requirements of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," and 10 CFR Part 21, "Reporting of Defects and Noncompliance." The NRC inspection team conducted this inspection from March 20, 2023, through March 24, 2023. This was the fourth NRC vendor inspection at the GNF-A facility.

This technically focused inspection specifically evaluated GNF-A's implementation of the quality activities associated with the design, fabrication and testing of safety-related fuel bundles being supplied to U.S. nuclear power plants.

- Inspection of the calibration laboratory and out of tolerance measurement and test equipment (M&TE) storage area
- Attended the Condition Review Group and Corrective Action Review Board
- Observed the Final Assembly Inspection

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 inspection, the NRC inspection team implemented Inspection Procedure (IP) 43002, "Routine Inspections of Nuclear Vendors," dated February 10, 2023, IP 43004, "Inspection of Commercial-Grade Dedication Programs," dated February 10, 2023, and IP 36100, "Inspection of 10 CFR Part 21 and Programs for Reporting Defects and Noncompliance," dated February 10, 2023.

With the exception of the notice of nonconformance described below, the NRC inspection team concluded that GNF-A's QA policies and procedures comply with the applicable requirements of Appendix B to 10 CFR Part 50 and 10 CFR Part 21, and that GNF-A personnel are implementing these policies and procedures effectively. The results of this inspection are summarized below.

10 CFR Part 21 Program

The NRC inspection team reviewed GNF-A's policies and implementing procedures that govern the implementation of its 10 CFR Part 21 program to verify compliance with the requirements of 10 CFR Part 21. The NRC inspection team: 1) reviewed the 10 CFR Part 21 postings; 2) reviewed a sample of safety-related purchase orders to ensure 10 CFR Part 21 was specified; 3) verified that GNF-A's nonconformance and correction action programs provide a link to the 10 CFR Part 21 program; and 4) reviewed GNF-A's process for Part 21 evaluations. No findings of significance were identified.

Inspections

The NRC inspection team issued Nonconformance 99902108/2023-201-01 in association with GNF-A's failure to implement the regulatory requirements of Criterion X, "Inspection," of Appendix B to 10 CFR Part 50. Nonconformance 99902108/2023-201-01 cites GNF-A for failing to ensure that inspections were performed by individuals other than those who performed the activity being inspected. Specifically, GNF-A changed a process without recognizing that the change replaced the inspection of the water rod's proper orientation and seating from the independent quality leader with verification by shop operations personnel who shared the same first line supervisor.

Audits

The NRC inspection team issued Nonconformance 99901376/2023-201-02 in association with GNF-A's failure to implement the regulatory requirements of Criterion XVIII, "Audits," of Appendix B to 10 CFR Part 50. Nonconformance 99902108/2023-201-02 cites GNF-A for failing to implement a comprehensive system of planned and periodic audits to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program. Specifically, GNF-A failed to (1) adequately translate the requirements in Sections 18.3.1.2.b and c of GNF-A NEDO-11209-A, "GE Hitachi Nuclear Energy Quality Assurance Program Description," Revision 17, for internal audit intervals and annual evaluations into CP-18-100; Revision 11.0, "Quality Assurance Internal Audit," and (2) conduct supplemental audits of FMO – Bundle Assembly, as required by Section 4.1.6.3 of CP-18-100, 'when conditions indicate that quality of an item is in jeopardy due to deficiencies in the QA program.'

Other Inspection Areas

The NRC inspection team determined that GNF-A established its programs for commercial-grade dedication, procurement document control, control of purchased equipment, materials, and services, control of measuring and test equipment, nonconforming material, parts, or components, and corrective actions in accordance with the applicable regulatory requirements of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed and activities observed, the NRC inspection team also determined that GNF-A is implementing its policies and procedures associated with these programs. As a result of this inspection, GNF-A generated CRs to address concerns of low significance identified by the NRC inspection team that did not meet the threshold of more than minor concerns as defined by Inspection Manual Chapter 0617, "Vendor and Quality Assurance Implementation Inspection Reports." No findings of significance were identified in these areas.

REPORT DETAILS

1. 10 CFR Part 21 Program

a. Inspection Scope

The NRC inspection team reviewed Global Nuclear Fuel – Americas (hereafter referred to as GNF-A) 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 the 10 CFR Part 21 postings and a sample of GNF-A’s purchase orders (PO) 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 GNF-A’s nonconformance and corrective action procedures provide a link to the 10 CFR 21 program. Furthermore, for a sample of 10 CFR 21 evaluations performed by GNF-A, the NRC inspection team verified that GNF-A 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 21 program with GNF-A 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 GNF-A is implementing its 10 CFR 21 program in accordance with the regulatory requirements of 10 CFR 21. Based on the limited sample of documents reviewed, the NRC inspection team determined that GNF-A is implementing its policies and procedures associated with the 10 CFR 21 program. No findings of significance were identified.

2. Inspection

a. Inspection Scope

The NRC inspection team reviewed GNF-A’s policies and implementing procedures that govern the implementation of its quality control program to verify compliance with the requirements of Criterion X, “Inspection” 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 reviewed the implementation and changes to procedures and instructions supporting activities affecting quality during the assembly of fuel bundles. Specifically, the NRC inspection team reviewed the operations and quality control procedures supporting the assembly and final inspection of fuel bundles, conducted

interviews with quality control personnel, observed the assembly and inspection of several fuel bundles, and reviewed the training and qualification records associated with the observed activities.

The instructions and procedures reviewed were related to the assembly of GNF-A's various fuel bundle designs, with a focus on GNF-3 fuel bundle assembly. The instructions and procedures were reviewed, and implementation observed to assess whether the instructions and procedures were appropriately established, changes controlled, and implemented. Further, inspection control documents were reviewed to verify whether the item inspected, associated inspection date, observation, and results of examination and tests could be determined. Fuel assembly mandatory hold points were observed by the NRC inspection team and associated inspection control procedures reviewed. The ability to access inspection results and documentation regarding the qualification, authority and independence of inspection personnel were reviewed.

The NRC inspection team reviewed Condition Reports (CRs) 38307 and 38740, which outlined human performance issues identified during a client audit, and a requested stop work because of another client audit. Additional review activities included another CR (40108), a notification in accordance 10 CFR Part 21 (2022-17-01), and the associated CR 40108 root cause investigation concerning the discovery in July 2021 of a raised water rod in a GNF-3 fuel bundle in-core at a facility. The following applicable revisions of the following procedures that were in effect between March 1, 2021, through August 1, 2022, associated with fuel bundle assembly were reviewed:

- Operating Procedure (OP)-1050.30.100, "Fuel Bundle Assembly – General Information,"
- OP-1050.30.301, "Fuel Bundle Assembly – Quality at the Source (QATS),"
- Temporary Operating Procedure (TOP)-50075, Rev 1, "QATS Bundle-Rods Table Inspections", Expired December 22, 2021,
- TOP-29511, Rev 0, "QATS Bundle-Rods Table Inspections", Expired March 1, 2021, and,
- Quality Control Inspection Instruction (QCII)-5.2.5, "Fuel Bundle Table Inspection."

The NRC inspection team also discussed the inspection program with GNF-A'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

The NRC inspection team reviewed the instructions provided that guided the assembly of the fuel bundle. Observation of the fuel bundle assembly activities revealed that while present in a designated location and available on-line, the instructions were not continually used. The NRC inspection team reviewed training for operations staff and observed the operations staff assembling a fuel bundle. The training for the operations staff relied on appropriately targeted critical activities during a written test, combined with on-the-job observation of critical skills. Additionally, the NRC inspection team observed that the Fuel Business System (FBS) allowed for the development of inspection documentation, wherein the item, inspection date, observation, and results of examination and tests were recorded. Additionally, the FBS was used to provide a digital signature and date for the authorized

quality control representative. Mandatory hold points were also controlled by the FBS to ensure that proper approvals are received based on existing instruction requirements. The NRC inspection found that the skill-of-the craft was sufficient for the assembly activities observed by the NRC inspection team and were properly implemented consistent with instructions. The inspection activities observed were performed by persons other than those who directly performed or supervised the work.

The NRC inspection team also reviewed the control of changes to the observed fuel bundle assembly inspection activities over the last several years. The NRC focused specifically on the changes made to the oversight of the installation of the water rod. Prior to March 1, 2021, an independent quality leader was responsible for inspecting the water rod installation and ensuring that it was correctly installed, aligned, and captured. At the time, this inspection could only occur during the time of bundle assembly, as it was not believed verification of correct water rod installation could be performed during the final bundle inspection.

The NRC inspection team found that between March 1, 2021, through August 1, 2022, GNF-A revised temporary change (TOP- 29511, Rev. 0) to the quality control inspection procedure (QCII-5.2.5 Revs. 106-111) with TOP-50075, Revs. 0 and 1, which replaced the inspection of the water rod's proper orientation and seating from the independent quality leader with verification by shop operations personnel who shared the same first line supervisor. The NRC inspection team identified this issue as Notice of Nonconformance (NON) 99901376/2023-201-01 for GNF's failure to ensure inspection activities were performed by individuals other than those who performed the activity being inspected and do not report to the same manager. GNF-A determined that water control rods from several licensees could be adversely affected and an additional water rod at GNF-A was found in an improper orientation. Water rods not in the proper locked orientation can lead to the fuel assembly grid spacers migration in future power plant operation fuel cycles resulting in impacts to safety limits for bundle critical power.

GNF-A initiated CR 42081 to address this issue.

The NRC inspection team identified another issue related to stop work authority. The NRC inspection team verified that GNF-A revised QCII 5.2.8, "Fuel Bundle Final Inspection," Rev. 103, August 5, 2022, to add verification of the orientation of the GNF-3 tabbed water rod. The NRC inspection team identified that the instruction indicates those conditions upon which the inspection activity could be stopped and requires the inspector to contact the QC engineer. It supports inspection activities being conducted by an individual from a different organization than performed the fuel bundle assembly activities and designates hold points important for verification of quality activities.

The NRC inspection team noted that the ability to stop work to ensure that cost and schedule considerations do not override quality and safety considerations were not present in the instructions, procedures nor in the training related to fuel bundle assembly quality activities. The NRC inspection team determined that procedures established to control the quality of fuel assembly inspection activities did not contain the authority/responsibility to ensure that cost and schedule considerations do not override quality or safety considerations by the ability/authority to stop work. Section 1.8 of NEDO-11209-A, "GE Hitachi Nuclear Energy Quality Assurance Program Description," Revision 17, discuss the ability of all employees to stop work to ensure that cost and schedule consideration do not override quality and safety considerations.

The NRC inspection team considers this issue to be minor given ongoing efforts in the quality organization to emphasize quality and safety considerations and a discussion with quality control staff. This issue was entered into GNF-A's corrective action program through CR 42078.

c. Conclusion

The NRC inspection team issued NON 99901376/2023-201-01 in association with GNF-A's failure to ensure that inspections were performed by individuals who do not report to the supervisors responsible for the work being inspected. Specifically, GNF-A initiated CAA Temporary Operating Procedure, TOP-50075, Revisions 0 and 1, "QATS Bundle-Rods Table Inspections" removed the requirement for Quality Inspectors to perform quality inspection activities, such as the water rod installation, which allowed personnel who were assigned to the supervisor responsible for the work to also inspect the work.

3. Internal Audits

a. Inspection Scope

The NRC inspection team reviewed GNF-A's policies and implementing procedures that govern the control of nonconformances to verify compliance with the requirements of Criterion XVIII, "Audits" of Appendix B to 10 CFR Part 50. The NRC inspection team reviewed GNF-A's internal audit schedule, audit plans, and audit reports. The NRC inspection team selected a sample of internal audit plans and associated audit reports of various organizations within GNF-A and verified that the audit documents reviewed were adequately completed. The NRC inspection team verified that GNF-A's procedures described the scope and purpose of audits to be performed, audit criteria, and corrective actions when required. The NRC inspection team verified that the audit teams were selected using qualified auditors and that they were not auditing their own work. The NRC inspection team verified from review of a sample of audits that they were performed using checklists. The NRC inspection team reviewed the qualification records of the lead auditors who performed the audits and verified that qualification activities met GNF-A's requirements for lead auditors.

The NRC inspection team discussed the internal audits program with GNF-A'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

The NRC inspection team found that GNF-A's procedures for conducting internal audits did not adequately translate the audit interval and annual evaluation requirements within NEDO-11209-A. NEDO-11209-A, Revision 17, "GE-Hitachi Nuclear Energy Quality Assurance Program Description," into its internal audit implementing procedure, CP-18-100, Revision 11.0, "Quality Assurance Internal Audit." NEDO-11209-A, Revision 17, Section 18.3.1.2 identifies requirements for internal audits scheduling in which the audit intervals are dependent upon whether the activities are for a licensed portion of its facilities. Section 18.3.1.2.b states "[a]fter placing a licensed facility into operation - All applicable quality assurance program elements for each functional area shall be audited within a period of two

years...the period may be extended one year at a time...based on the results of an annual evaluation..." Section 18.3.1.2.c states, "[a]ctivities not related to a licensed facility or other support activities - All applicable quality assurance program elements shall be audited at least once each year...This interval may be extended up to two years based on the results of an annual evaluation and objective evidence that the activities are being satisfactorily accomplished in accordance with the applicable quality assurance program elements." Section 4.1.2 of CP-18-100 states, "[e]nsure that the organization's QA program is audited at least every two (2) years for the applicable 18 Criteria of 10 CFR 50 Appendix B..." CP-18-100 did not include criteria to (1) differentiate the internal audit interval requirements for licensed versus and non-licensed facilities, and (2) perform annual evaluations when the internal audit interval is extended, as required in Sections 18.3.1.2.b and c of NEDO -11209-A. As a result, an internal audit of FMO-Bundle Assembly was not scheduled or performed in 2022, and an annual evaluation was not performed. This is the first example of NON 99901376/2023-201-02.

Section 4.1.6.3 of CP-18-100 requires scheduling of supplement audits, "[w]hen it is suspected that the quality of an item is in jeopardy due to deficiencies in the QA program." The NRC inspection team found that GNF-A did not conduct supplemental audits of FMO – Bundle Assembly, as required by Section 4.1.6.3 of CP-18-100, when conditions indicate that the quality of an item is in jeopardy due to deficiencies in the QA program. Section 4.1.6.3 of CP-18-100 requires scheduling of supplement audits, "[w]hen it is suspected that the quality of an item is in jeopardy due to deficiencies in the QA program." Condition Report (CR) 38307 was initiated in November 2021, and CRs 38729 and 38740 were initiated in February 2022, documenting issues identified that were attributed to human performance issues within FMO that created conditions adverse to quality. However, GNF-A did not schedule a supplement audit of FMO and as a result, deficiencies in inspections during the bundle manufacturing process rendered the quality of assembled fuel bundles to be unacceptable or indeterminate after delivery of the product to NRC Licensees. This is the second example of NON 99901376/2023-201-02.

GNF-A generated CR 42078 to document these issues.

c. Conclusion

The NRC inspection team issued NON 99901376/2023-201-02 in association with GNF-A's failure to implement the regulatory requirements of Criterion XVIII to Appendix B to 10 CFR Part 50. NON 99901376/2023-201-02 cites GNF-A's for failing to ensure that a comprehensive system of planned and periodic audits was carried out to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program.

4. Commercial-Grade Dedication

a. Inspection Scope

The NRC inspection team reviewed GNF-A's policies and implementing procedures that govern the implementation of its commercial-grade dedication (CGD) program to verify compliance with the regulatory requirements of Criterion III, "Design Control," and Criterion

VII, "Control of Purchased Material, Equipment, and Services," of Appendix B to 10 CFR Part 50.

The NRC inspection team reviewed GNF-A's program for the dedication of commercial-grade items for use in safety-related applications to verify its compliance with the applicable regulatory requirements. This assessment included a review of the policies and procedures governing the implementation CGD activities, interviews with GNF-A's personnel, and reviews of related documentation. Specifically, the NRC inspection team reviewed dedication packages to assess the different elements of the CGD program, including the technical evaluation process, dedication specification, supplier commercial grade survey reports, and receipt inspection reports. The NRC inspection team evaluated the criteria for the identification of item functions, selection of critical characteristics and acceptance criteria, and the identification of verification methods to verify effective implementation of GNF-A's CGD process.

The NRC inspection team also discussed the CGD programs with GNF-A'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 GNF-A is implementing its commercial-grade dedication program in accordance with the regulatory requirements of Criterion III 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 GNF-A is implementing its policies and procedures associated with the commercial-grade dedication program. No findings of significance were identified.

5. Supplier Oversight

a. Inspection Scope

The NRC inspection team reviewed GNF-A's policies and implementing procedures that govern the implementation of its supplier oversight program to verify compliance with the regulatory requirements of Criterion VII of Appendix B to 10 CFR Part 50.

The NRC inspection team reviewed GNF-A's approved supplier list (ASL), and a sample of supplier audits. The NRC inspection team selected a sample of suppliers from the ASL to review the methodology for conducting and documenting audits to verify adequate evaluation of the suppliers' controls for meeting the applicable requirements of Appendix B to 10 CFR Part 50. For the sample of supplier audits reviewed, the NRC inspection team verified the following: the audit reports included an audit plan; audits were performed according to established frequency; audit reports included adequate documented objective evidence of compliance with the applicable requirements; and audit documentation was reviewed by GNF-A responsible management. The NRC inspection team also verified that audits performed by the Nuclear Industry Assessment Committee were evaluated by GNF-A

in accordance with its written procedures for applicability to its scope of activities. The NRC inspection team reviewed the qualification records of the lead auditors who performed the audits and verified that qualification activities met GNF-A's requirements for lead auditors.

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

6. Control of Measuring and Test Equipment

a. Inspection Scope

The NRC inspection team reviewed GNF-A's policies and implementing procedures that govern the implementation of its control of the measuring and test equipment (M&TE) program to verify compliance with the regulatory requirements of Criterion XII, "Control of Measuring and Test Equipment," of Appendix B to 10 CFR Part 50.

For the sample of M&TE reviewed, the NRC inspection team determined that the M&TE had the appropriate calibration stickers and current calibration dates, including the calibration due date. The calibration records reviewed by the NRC inspection team indicated the accuracy required, calibration results, calibration dates, and the due date for recalibration.

The NRC inspection team confirmed that when M&TE equipment is found to be out of calibration, the M&TE is removed from use and segregated to prevent further usage. For these segregated M&TE, the NRC inspection team verified that GNF-A documented the out-of-tolerance conditions in a CR for review and disposition of the out-of-tolerance condition. The NRC inspection team verified that GNF-A identified which items have been accepted using this equipment since the last valid calibration date to perform the extent of condition review.

The NRC inspection team performed a walk-through of GNF-A's calibration laboratory to observe that M&TE were labeled, handled, and stored in a manner that indicated the calibration status of the instrument. The NRC inspection team observed a Fuel Bundle Final Assembly Inspection and verified that the M&TE used during the inspection were calibrated and maintained at prescribed intervals prior to use.

The NRC inspection team also discussed the control of M&TE program with GNF-A'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 GNF-A is implementing its control of the M&TE program in accordance with the regulatory requirements of Criterion XII of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed and activities observed, the NRC inspection team determined that GNF-A is implementing its policies and procedures associated with the control of M&TE. No findings of significance were identified.

7. Nonconforming Materials, Parts, or Components and Corrective Action

a. Inspection Scope

The NRC's inspection team reviewed GNF-A's policies and implementing procedures that govern the implementation of its control of nonconforming materials, parts or components; and corrective action programs to verify compliance with the requirements of Criterion XV, "Nonconforming Materials, Parts, or Components," and Criterion XVI, "Corrective Action," of Appendix B, to 10 CFR Part 50.

The NRC inspection team reviewed a sample of GNF-A inspection reports (IRs), which document identified nonconforming items to verify that GNF-A: (1) dispositioned the IRs in accordance with the applicable procedures, (2) documented an appropriate technical justification for various dispositions, and (3) took adequate corrective action to address the nonconforming items. For IRs that were dispositioned use-as-is, the NRC inspection team confirmed that the technical justifications were documented to verify the acceptability of the nonconforming item.

The NRC inspection team reviewed a sample of CRs to ensure that conditions adverse to quality were promptly identified and corrected. In addition, 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. The NRC inspection team observed a meeting of the Condition Review Group and Corrective Action Review Board and verified that GNF-A is implementing its policies and procedures for appropriately determining the CR priority levels. In addition, the NRC inspection team verified that GNF-A's CRs provide a link to the 10 CFR Part 21 program.

The NRC inspection team discussed the nonconforming materials, parts, or components and corrective action programs with GNF-A's management and technical personnel. 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 GNF-A is implementing its nonconforming materials, parts, or components and corrective action programs in accordance with the regulatory requirements of Criterion XV and Criterion XVI of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed and activities observed, the NRC inspection team determined that GNF-A is effectively implementing its policies and procedures associated with the control of nonconforming materials, parts, or components and corrective action program activities. No findings of significance were identified.

8. Entrance and Exit Meetings

On March 20, 2023, the NRC inspection team discussed the scope of the inspection with Ms. Michelle Catts, Senior Vice-President, Nuclear Programs and other members of GNF-A's management and technical staff. On March 24, 2023, the NRC inspection team presented the inspection results and observations during an exit meeting with Ms. Catts, and other members of GNF-A'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
Stanley Griffin	Nuclear Programs Quality Leader	Global Nuclear Fuel-Americas (GNF-A)	X	X	X
Brian Neely	Quality Leader	GNF-A	X	X	X
Michael Chilton	Value Stream Leader	GNF-A	X		
Joshua Thomas	Nuclear Safety Analyst	GNF-A	X	X	X
Russel Stachowski	Chief Consulting Engineer	GNF-A	X	X	
Lukas Trosman	Consulting Engineer	GNF-A	X	X	
Garrett Grove	Manager – Shop Ops and Bundle Assembly	GNF-A	X	X*	X
Mark Gerdes	Senior Business Process Manager	GNF-A	X	X	
R. Taylor Blake	Lead Industry Compliance Specialist	GNF-A	X	X	
Michael Eason	PMQC Leader	GNF-A	X	X	
Ryan Huth	General Manager Fuel Manufacturing, LFM	GNF-A	X	X*	
Doug Nay	Sr. Manufacturing Engineering Staff Mgr	GNF-A	X	X*	
Brett Schulz	FMO QA Manager	GNF-A	X	X	X
Michael C. Torbit	Lead Industry Compliance Specialist	GNF-A		X	
Michelle Catts	Sr. Vice-President Nuclear Programs	GNF-A	X*	X*	

Name	Title	Affiliation	Entrance	Exit	Interviewed
David Ethington	Quality Programs Leader	GNF-A	X*	X*	
Jennifer Gibson	Sr. Quality Staff Mgr. Performance Improvement	GNF-A	X*		X*
Marianna Staks	Part 21 Coordinator	GNF-A	X*	X*	
Phyllis Battle	Corrective Action Program	GNF-A	X*	X*	
Greg Huff	Engineering Software, Digital/Software	GNF-A	X*	X*	
Quintas Shower	QA Engineer Digital/Software	GNF-A	X*		
Kimberly Myer	Senior Engineer Digital/Software	GNF-A	X*		
Greg Burcham	QA Engineering Digital/Software	GNF-A	X*		
Wilbert (Lynn) Cook	Supplier Quality Manager	GNF-A	X*	X*	
Tau Wu	Engineering Manager, Fuel Performance and Design	GNF-A	X*	X*	
Brian Moore	Engineering General Manager, Core and Fuels Engineering	GNF-A	X*	X*	
Jessica Hayes	Executive Administrative Specialist	GNF-A		X*	
Bradley Larson	Sr. Sourcing Manager	GNF-A		X*	
Erin Mann	Supplier Quality Engineer	GNF-A		X*	
Craig Bardsley	Senior Director of Inspection Services	GNF-A			X
Andrea Keim	Inspection Team Leader	Nuclear Regulatory Commission (NRC)	X	X	

Name	Title	Affiliation	Entrance	Exit	Interviewed
Dong Park	Inspector	NRC	X		
Deanna Zhang	Senior Inspector	NRC	X	X	
Eva Brown	Senior Inspector	NRC	X	X	
Joshua Kaizer	Technical Expert	NRC	X		
Kerri Kavanagh	Branch Chief	NRC		X*	

*Participated remotely.

2. INSPECTION PROCEDURES USED

Inspection Procedure (IP) 36100, "Inspection of 10 CFR Part 21 and Programs for Reporting Defects and Noncompliance," dated February 10, 2023.

IP 43002, "Routine Inspections of Nuclear Vendors," dated February 10, 2023.

IP 43004, "Inspection of Commercial-Grade Dedication Programs," dated February 10, 2023.

3. DOCUMENTS REVIEWED

Policies and Procedures

- Nuclear Engineering Design Operations (NEDO) No. 11209-A, "GE Hitachi Nuclear Energy Quality Assurance Program Description," Revision 17, dated December 8, 2022
- Common Procedure (CP)-01-202, Engineering and Manufacturing Interface Agreement," Revision 3.2, dated October 22, 2021
- CP-02-104, "Implementing Quality at the Source," Revision 2.0, dated November 2, 2021
- CP-07-02, "Supplier Approval", Revision 38.1, dated October 27, 2022
- CP-07-104, "Customer Purchase Order Technical Evaluation and Dedication of Commercial Grade Items and Services," Revision 6.8 dated January 3, 2023
- CP-10-02, "Product Quality Release and Certification," Revision 4.2, dated July 11, 2022
- CP-11-103, "Production Test – FMO and FCO," Revision 0.3, dated November 8, 2021
- CP-11-104, "Laboratory/Service Tests," Revision 0.3, dated February 9, 2022
- CP-11-300, "Proof and Confirmation Testing," Revision 0.1, dated January 12, 2022
- CP-12-101, "Calibration Control Program," Revision 10, dated August 11, 2021
- CP-15-07, "Stop Work Notice," Revision 7.2, dated September 18, 2019
- CP-15-104, "Material Review Process," Revision 0.5, dated November 30, 2016
- CP-16-100, "Trending Analysis," Revision 3, January 25, 2023
- CP-16-101, "Lessons Learned/Operating Experience Program," Revision 9.1, dated May 5, 2022
- CP-16-106, "Change Management Process," Revision 11.1, dated December 3, 2021
- CP-16-107, "Status and Adequacy Report," Revision 6.0, dated May 15, 2020
- CP-16-108, "Corrective Action Program," Revision 14, dated February 27, 2023
- CP-16-114, "Human Performance Observation and Coaching," Revision 3, dated April

28, 2021

- CP-16-117, "Benchmarking," Revision 1, dated January 28, 2015
- CP-16-202, "Common Cause Analysis," Revision 6, May 28, 2020
- CP-18-02, "Supplier Audits and Commercial Grade Survey," Revision 21.0, dated March 15, 2023
- CP-18-100, "Quality Assurance Internal Audit," Revision 11.0, dated March 16, 2023
- CP-18-102, "Surveillance Process," Revision 5.0, dated June 17, 2021
- CP-20-107, "GNF-A Manufacturing Training and Qualification Program," Revision 8, dated March 2, 2023
- CP-20-301, "Quality and Technical Training," Revision 3.2, dated April 22, 2022
- Work Instruction (WI)-10-105-07, "Common Characteristics of Counterfeit, Fraudulent, and Substandard Items," Revision 2.1, dated December 6, 2021
- WI-15-100-02, "GNF-A Nonconforming Material Control," Revision 0.5, dated October 24, 2019
- WI-16-108-01, "Condition Review Process," Revision 12.0, dated November 30, 2021
- WI-16-108-01-F03, "Priority Screening Criteria Matrix," Revision 3
- WI-16-108-04, "Cause Analysis," Revision 8, March 24, 2022
- WI-16-108-07, "Reporting of Defects and Noncompliance Under 10 CFR Part 21," Revision 11, dated February 9, 2023
- WI-16-106-01, "GNF-A Change Management Process (CMP)," Revision 2, dated August 27, 2018
- WI-16-106-02, "Configuration Management Program-Nuclear Manufacturing Operations," Revision 19, dated February 8, 2023
- WI-16-106-03, "FCO Facility Change Management Program," Revision 1, dated September 3, 2019
- Quality Control Inspection Instruction (QCII) 5.2.8, "Fuel Bundle Final Inspection," Revisions 95 through 107
- QCII 5.2.5, "Bundle Component Inspection," Revisions 105 through 113
- QCII 00029, "GNF2 and GNF3 Bundle Spacer Inspection," Revision 7
- NQS-2021-3, "FMO QATS Program Adherence to NEDO-11209-A" dated November 04, 2021
- Gage Inspection Standard No. A-07, "Lost or Damaged M&TE Control," Revision 8.0
- Gage Inspection Standard No. A-17, "Out-of-Tolerance/ Nonconforming Gages," Revision 20.0
- Quality Notice (QN) -02315, "Rational and Transition Plan to Move ABAM Table Inspection to QATS," Revision 0

Inspection Reports (IRs)

- 2022-2023 Potential Reportable Conditions.xlsx
- 4121, 4122, 4138, 4141, 4154, 4368, 4370, 4371, 4375, 4381, 4389, 4391, 4393, 4399

Condition Reports (CRs)

- GNFA-ABC-CRs-NRC-03-21-23 sorted.xlsx
- 35774, 36984, 37221, 38005, 38307, 38729, 38740, 38828, 38835, 38910, 39183, 39397, 39686, 40108, 40198, 40202, 40235, 40298, 40304, 40315, 40333, 40334, 40357, 40396, 40404, 40425, 40461, 40566, 40820, 40843, 41020, 41090, 41330,

41509

Part 21 Reports

- 2022-2023 Potential Reportable Conditions.xlsx
- SC 22-04, "Part 21 60-Day Final Report Notification: GNF3 Raised Water Rod (SC-22-04 Revision 2) dated November 30, 2022
- PRC 22-05, "Power-dependent Limits Below PLU Power Level," dated November 2, 2022
- PRC 22-06, "Perry Cycle-Independent Power-Dependent Off-Rated Limits," dated December 15, 2022
- PRC 22-07, "EDBUP02P application failed to transfer files to the OpenVMS WREDB," dated January 23, 2023

Purchase Order (PO)

- PO 437140326, Revision 3, dated January 12, 2023
- PO 437137087, Revision 2, dated March 14, 2022
- PO 437142428, Revision 0, dated December 1, 2022
- PO 437140326, Revision 3, dated January 12, 2023
- PO 437137087, Revision 2 dated March 14, 2022
- PO 437135178, Revision 4 dated February 28, 2022

Commercial-Grade Dedication Records

- 000N7188, "Dedication Specification for Upper Tie Plate Casting," Revision 1, dated January 2017
- 002N8689, "Dedication Specification for Pre-finished Tube Blank," Revision 1
- 001N1987, "Dedication Specification for Water Rod Endplugs," Revision 0, approved on June 3, 2014
- Supplier Commercial Grade Survey Report for Avko Screw Machine Products Ltd, dated 26, 2021
- Supplier Commercial Grade Survey Report for PCC Structural, dated September 17, 2021
- Supplier Commercial Grade Survey Report for BWXT Nuclear Energy Canada, dated September 30, 2021
- Supplier Audit WZ-2021-01 for TSB Nuclear Energy Services dated September 16, 2021
- NIAC Audit Report 26064 for ATI Special Alloys date of Audit is June 21-28, 2021
- GNF Third party assessment of NIAC Audit Report 26064 dated November 11, 2022

Receipt Inspections

- F01-15240NE, Receiving Inspection, dated July 26, 2022
- F01-15374NE Receiving Inspection, dated February 24, 2023
- F01-10470NE Receiving Inspection, dated February 2, 2022
- F01-14448NE Receiving Inspection, dated March 17, 2022

Measuring and Test Equipment Records

- Past due Gages List dated March 22.docx
- Out of Tolerance (OOT) Report Jan 1_2022 to Mar 16_2023.xlsx
- Gage Inspection Report, W89963, Set Block for Fuel Bundle
- Calibration certificates for W84864, WG002429, W89963, W89959, W17234, W12481

Internal Audit Reports and Surveillances

- NQA-2021-03, "GNF-A Manufacturing FMO: Bundle Assembly, Chemet Lab Audit Report," dated May 21, 2021
- NQA-2021-08, "GNF-A FCO Manufacturing," dated September 17, 2021
- NQA-2022-02, "GNF-A FMO: Ceramics & DCP," dated May 27, 2022

Internal Audit Schedule

- 2022 Nuclear Programs Quality Internal Audit Schedule, Revision 2, dated December 26, 2022
- 2023 Nuclear Programs Quality Internal Audit Schedule, dated December 26, 2022

Condition Reports Opened During the NRC Inspection

- 42078
- 42079
- 42081

Training Records

- Amos Bellamy
- Gerry Mancuso
- David V Ethington
- Robert Taylor Blake
- Clark Burger
- Mark Gerdes

ACRONYMS

ASL	Approved Suppliers List
ATR	Acceptance Test Report
CMTRs	Certified Material Test Reports
CP	Common Procedure
CRs	Condition Reports
CRG	Condition Review Group
DS	Dedication Specification
ECPs	Engineering Computer Packages
FBS	Fuel Business System
GNF-A	General Electric Hitachi
GNF-A	Global Nuclear Fuel - Americas
IRs	Inspection Reports

MIDAS	Multi-Inspection and Data Acquisition System
M&TE	Measuring and Test Equipment
NIAC	Nuclear Industry Assessment Committee
NRC	Nuclear Regulatory Commission
OP	Operating Procedure
POs	Purchase Orders
PPQP	Process/Product Quality Plan
P&P	Policy and Procedure
QCII	Quality Control Inspection Instruction
TOP	Temporary Operating Procedure
WI	Work Instruction