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

July 7, 2023

Mr. Ghassan Ghrear
Quality Assurance Manager
Prysmian Group
1600 Main Street
Willimantic, CT 06226

SUBJECT: NUCLEAR REGULATORY COMMISSION VENDOR INSPECTION REPORT OF PRYSMIAN GROUP NO. 99900227/2023-201, AND NOTICE OF NONCONFORMANCE

Dear Mr. Ghrear:

On May 22 - 26, 2023, the U.S. Nuclear Regulatory Commission (NRC) staff conducted an inspection at the Prysmian Group's (hereafter referred to as Prysmian) facility in Willimantic, CT. The purpose of this limited-scope routine inspection was to assess Prysmian'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 Prysmian's implementation of quality activities associated with the qualification and commercial-grade dedication (CGD) of class 1E components for U.S. nuclear power plants. In addition, the NRC inspection team evaluated Prysmian's closure of the inspection findings documented in inspection report No. 99900227/2015-201, dated November 16, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15063A055). The enclosed report presents the results of the inspection. This NRC inspection report does not constitute NRC's endorsement of Prysmian'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 did not meet certain regulatory requirements imposed on you by your customers or NRC licensees. Specifically, the NRC inspection team determined that Prysmian was not fully implementing its QA program in the area of Control of Purchased Material, Equipment, and Services. The specific finding and references to the pertinent requirements are identified in the enclosures to this letter. In response to the enclosed notice of nonconformance (NON), Prysmian should document the results of the extent of condition review for the finding and determine if there are any effects on other safety-related components.

Please provide a written statement or explanation within 30 days 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," the NRC will make available electronically for public inspection a copy of this letter, its enclosure, and your response through the NRC's Public Document Room or

from the NRC's ADAMS, which is accessible at http://www.nrc.gov/reading-rm/adams.html. To the extent possible, your response 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, 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 07/07/23

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

Docket No.: 99900227

EPID No.: I-2023-201-0031

Enclosure:
Inspection Report No. 99900227/2023-201
and Attachment

SUBJECT: NUCLEAR REGULATORY COMMISSION VENDOR INSPECTION REPORT OF PRYSMIAN GROUP NO. 99900227/2023-201, NOTICE OF NONCONFORMANCE Dated: July 7, 2023

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ADAMS Accession No.: ML23174A182 **NRR-106**

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NAME	YDiaz-Castillo	CCauffman	KKavanagh
DATE	6/27/2023	6/27/2023	7/7/2023

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NOTICE OF NONCONFORMANCE

Prysmian Group
1600 Main Street
Willimantic, CT 06226

Docket No. 99900227
Report No. 2023-201

Based on the results of a U.S. Nuclear Regulatory Commission (NRC) inspection conducted at the Prysmian Group's (hereafter referred to as Prysmian) facility in Willimantic, CT, from May 22, 2023, through May 26, 2023, Prysmian did not conduct certain activities in accordance with NRC requirements that were contractually imposed on Prysmian by its customers or NRC licensees:

A. Criterion VII, "Control of Purchased Material, Equipment, and Services," 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 "Measures shall be established to assure that purchased material, equipment, and services, whether purchased directly or through contractors and subcontractors, conform to the procurement documents. These measures shall include provisions, as appropriate, for source evaluation and selection, objective evidence of quality furnished by the contractor or subcontractor, inspection at the contractor or subcontractor source, and examination of products upon delivery. The effectiveness of the control of quality by contractors and subcontractors shall be assessed by the applicant or designee at intervals consistent with the importance, complexity, and quantity of the product or services."

   Contrary to the above, as of May 26, 2023, Prysmian failed to establish adequate measures for source evaluation and selection to verify the effectiveness of the control of quality by contractors and subcontractors to assure that purchased services conform to the procurement documents. Specifically, Prysmian did not perform an on-site commercial-grade survey of a supplier of calibration services to determine the adequacy of the supplier's quality controls to ensure the critical characteristics of the calibration services continue to be acceptable. Instead, Prysmian performed a fully remote commercial-grade survey of the calibration supplier.

   This issue has been identified as Nonconformance 99900227/2023-201-01.

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 actions 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's Public Document Room or from the NRC's

document system (ADAMS), accessible from the NRC's Web site at https://www.nrc.gov/reading-rm/adams.html. To the extent possible, your response 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 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 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."

Dated this 7th day of July 2023.

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

Docket No.:	99900227
Report No.:	99900227/2023-201
Vendor:	Prysmian Group (formerly known as General Cable) 1600 Main Street Willimantic, CT 06226
Vendor Contact:	Mr. Ghassan Ghrear Quality Assurance Manager Phone: 1-860-465-8838 Email:GGhrear@generalcable.com
Nuclear Industry Activity:	Prysmian Group's scope of supply includes qualification and commercial-grade dedication of class 1E components for U.S. nuclear power plants.
Inspection Dates:	May 22 - 26, 2023
Inspectors:	Aaron Armstrong NRR/DRO/IQVB Team Leader Dong Park NRR/DRO/IQVB Yamir Diaz-Castillo NRR/DRO/IQVB Yiu Law NRR/DRO/IQVB (Remote)
Approved by:	Kerri Kavanagh, Chief Quality Assurance and Vendor Inspection Branch Division of Reactor Oversight Office of Nuclear Reactor Regulation

EXECUTIVE SUMMARY

Prysmian Group
99900227/2023-201

The U.S. Nuclear Regulatory Commission (NRC) staff conducted a limited-scope routine vendor inspection at the Prysmian Group's (hereafter referred to as Prysmian) facility in Willimantic, CT, to verify 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 on-site from May 22 - 26, 2023. The last inspection at this facility was conducted in February 2015 when the facility was known as General Cable.

This technically focused inspection specifically evaluated Prysmian's implementation of the quality activities associated with the qualification and commercial-grade dedication (CGD) of class 1E components being supplied to U.S. nuclear power plants. In addition, the NRC inspection team evaluated Prysmian's closure of the inspection findings documented in inspection report (IR) No. 99900227/2015-201, dated March 23, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15063A055).

The following regulations served as the bases for the NRC inspection:

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

During 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 of Defects and Noncompliance," dated February 10, 2023.

The NRC inspection team observed the following specific activities:

- Crosslink Proof Test (Hot Creep) for Work Order No. 230467.000

The results of this inspection are summarized below.

Commercial-Grade Dedication

The NRC inspection team reviewed Prysmian's policies and implementing procedures that govern the implementation of its CGD program to verify compliance with the 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 identified several minor issues that are described in Section 1 of the inspection report and one nonconformance summarized below associated with Prysmian's implementation of its CGD program.

The NRC inspection team issued Nonconformance 99900227/20233-001-01 in association with Prysmian's failure to implement the regulatory requirements Criterion VII of Appendix B to 10 CFR Part 50. Specifically, Prysmian did not perform an on-site commercial-grade survey of a

supplier of calibration services to determine the adequacy of the supplier's quality controls to ensure that the critical characteristics of the calibration services continue to be acceptable. Instead, Prysmian performed a fully remote commercial-grade survey of the calibration supplier. Prysmian initiated Corrective Action Report No. 879069 to address this issue.

Nonconforming Materials, Parts, or Components and Corrective Action

The NRC inspection team reviewed the corrective actions that Prysmian took to address Notice of Violation (NOV) 99900227/2015-201-01, Notice of Nonconformance (NON) 99900227/2015-201-02, and NON 99900227/2015-201-03, documented in IR No. 99900227/2015-201, dated March 23, 2015. The NRC inspection team reviewed the documentation that provided the objective evidence that all the corrective actions were completed and adequately implemented. Based on this review, the NRC inspection team closed NOV 99900227/2015-201-01, NON 99900227/2015-201-02, and NON 99900227/2015-201-03.

Inspection Areas

The NRC inspection team determined that Prysmian established its programs for 10 CFR Part 21, nonconforming material, parts, or components, corrective action, design control and qualification, procurement document control and oversight of contracted activities, measuring and test equipment, and internal audits, in accordance with the applicable regulatory requirements of Appendix B to 10 CFR Part 50. In the area of supplier oversight, Prysmian does not have any safety-related suppliers. Therefore, supplier oversight was reviewed as part of its CGD program. Based on the limited sample of documents reviewed and activities observed, the NRC inspection team also determined that Prysmian is implementing its policies and procedures associated with these programs. No findings of significance were identified in these areas.

REPORT DETAILS

1. Commercial-Grade Dedication

   a. Inspection Scope

   The U.S. Nuclear Regulatory Commission (NRC) inspection team reviewed Prysmian Group's (hereafter referred to as Prysmian) 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 Purchase Equipment, Materials, and Services," 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."

   Prysmian's CGD program is limited to the dedication of copper, insulation compound, jacket compound, and calibration and testing services. Prysmian has 5 laboratory services on its Approved Suppliers List (ASL). Three of the laboratory services (two testing services and one calibration service) are dedicated by performing commercial-grade surveys. The other 2 laboratories (both calibration services) are dedicated by implementing the use of ISO 17025 accreditation in lieu of performing commercial-grade surveys for the procurement of calibration services. Prysmian implements this process as described in Nuclear Energy Institute (NEI) document No. 14-05A, "Guidelines for the Use of Accreditation in Lieu of Commercial-Grade Surveys for Procurement of Laboratory Calibration and Test Services," Revision 1, dated September 2020. The NRC staff determined this guidance to be acceptable in a safety evaluation (SE) dated November 23, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20322A019).

   The CGD documents reviewed included, as applicable: (1) purchase orders (POs); (2) technical evaluations; (3) failure modes and effect analysis (FMEA); (4) manufacturing specifications; (5) commercial-grade surveys; and (6) receipt inspection records. The NRC inspection team evaluated the criteria for the identification of the safety functions, FMEA, selection of critical characteristics and acceptance criteria, selection of verification methods, and the justification provided for the of the sampling methodologies, as applicable, to verify effective implementation of Prysmian's CGD process.

   The NRC inspection team also discussed the CGD program with Prysmian'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 identified one nonconformance and several minor issues with Prysmian's implementation of its CGD program with regards to the implementation of NEI 14-05A, Revision 1. The nonconformance and the minor issues are described below.

   Nonconformance 99900227/2023-201-01

   During the review of a sample of commercial-grade surveys, the NRC inspection team noted that Prysmian performed a fully remote commercial-grade survey of a supplier of

calibration services. During discussions with Prysmian's staff, the NRC inspection team learned that the commercial-grade survey was performed fully remote due to a lack of resources at the time. The calibration service calibrates two voltage units that test the dielectric properties of the cable compound. In addition, Prysmian did not develop any guidance, establish any controls, or open a corrective action report (CAR) for the performance of the remote commercial-grade survey to ensure the supplier was adequately controlling the critical characteristics for calibration services. Criterion VII of Appendix B to 10 CFR Part 50 states, in part, that "Measures shall be established to assure that purchased material, equipment, and services, whether purchased directly or through contractors and subcontractors, conform to the procurement documents. These measures shall include provisions, as appropriate, for source evaluation and selection, objective evidence of quality furnished by the contractor or subcontractor, inspection at the contractor or subcontractor source, and examination of products upon delivery."

The NRC inspection team identified this issue as an example of Nonconformance 99900227/2023-201-01 for Prysmian's failure to establish adequate measures for source evaluation and selection to verify the effectiveness of the control of quality by contractors and subcontractors to ensure that purchased services conform to the procurement documents. Prysmian initiated CAR No. 879069 to address this issue.

Minor Issues

During a review of a sample of POs issued to the calibration and testing commercial suppliers on Prysmian's ASL, the NRC inspection team noted that the POs did not invoke the applicable quality manual, implementing procedures, and associated revisions applicable to the critical characteristics identified during the commercial-grade surveys. As part of a commercial-grade survey, the verification of critical characteristics is accomplished by reviewing the suppliers' quality assurance (QA) program and implementing procedures controlling the critical characteristics and observing the actual implementation of these controls in the performance of the calibration and testing service. If the suppliers' controls are found to be satisfactory, then the POs for the services should invoke these controls as contract requirements to ensure they are implemented for the services being procured. The NRC inspection team determine this issue to be minor because Prysmian performs additional tests and inspections as part of the CGD process, and the results of these tests and inspections demonstrate that the critical characteristics were adequately controlled. Prysmian initiated CAR No. 879070 to address this issue.

On Prysmian's ASL, there are two testing suppliers and one calibration supplier for which Prysmian performs commercial-grade surveys. During the review of the commercial-grade survey of the calibration supplier, the NRC inspection team noted that Prysmian used the checklist for testing services instead of the checklist for calibration services. The NRC inspection team also noted that the commercial-grade surveys for the testing suppliers did not consistently provide objective evidence to validate the adequate implementation of the testing suppliers' quality controls over the critical characteristics. The NRC inspection team discussed with Prysmian's staff that the purpose of a commercial-grade survey is to verify one or more critical characteristics based on the merits of a commercial supplier's quality controls. The NRC inspection team determine this issue to be minor because Prysmian performs additional tests and inspections as part of the CGD process, and the results of these tests and inspections demonstrate that the critical characteristics were adequately controlled. Prysmian initiated CAR Nos. 879071 and 879072 to address these issues, respectively.

The NRC inspection team noted that Prysmian's process for the CGD of calibration services in accordance with Revision 1 of NEI 14-05A and the NRC's SE is not being adequately implemented. For example, the receipt inspection checklist for calibration services performed by an accredited laboratory to the requirements of International Standard Organization (ISO)/International Electrotechnical Commission (IEC) 17025, "General Requirements for the Competence of Testing and Calibration Laboratories," incorrectly lists the conditions from the NRC's SE as the critical characteristics required to be verified as part of the CGD process. The critical characteristics for calibration services are already verified as part of the laboratories' accreditation process under ISO/EC 17025-2017 and the conditions from the NRC's SE should not be identified as critical characteristics. These conditions are verified as part of the receipt inspection process to ensure that the PO requirements have been met. The NRC inspection team determined this issue to be minor because it is a documentation issue, and it had no impact on the CGD of the calibration services. Prysmian initiated CAR No. 879073 to address this issue.

The NRC inspect team review a sample of the calibration certificates and laboratory documentation for laboratory services that are dedicated by performing commercial-grade surveys and no findings of significance were identified. The NRC inspection team noted for a sample of the calibration certificates and laboratory documentation using Prysmian's ISO 17025 accreditation process that none of the documents certified that the PO requirements were met. The NRC's SE on NEI 14-05A Revision 1 states that at receipt inspection, it is validated that: (1) the laboratory's documentation certifies that the calibration was performed in accordance with the laboratory's 2017 edition of ISO/IEC 17025 program, and (2) that the PO requirements were met. The calibration certificates did state that the calibration was done in accordance with the laboratory's 2017 edition of ISO/IEC 17025 program. However, none of the documents provided by the laboratory included a statement that the PO requirements were met. The NRC inspection team and Prysmian discussed that objective evidence supporting the PO requirements were met could not be verified during the receipt inspection activity for Prysmian's dedication process. The NRC inspection team determined this issue to be minor because the laboratories were accredited to the 2017 edition of ISO/IEC 17025 and the PO requirements were verified during the inspection by the NRC inspection team. Prysmian initiated CAR No. 879075 to address this issue.

Most of Prysmian's calibration services are done on-site by a supplier of calibration services accredited to the 2017 edition of ISO/IEC 17025. This calibration supplier also has an office at Prysmian's facilities. While discussing the process for performing receipt inspection of the measuring and test equipment (M&TE) after it is calibrated by the on-site calibration supplier, the NRC inspection team asked for documented objective evidence that a receipt inspection is being performed to ensure that the laboratory met the requirements from the procurement documents consistent with the conditions from the NRC's SE. Prysmian was not able to provide any documentation that a receipt inspection is performed after the M&TE is calibrated and before it is being put back into service. The NRC inspection team determined this issue to be minor because the calibration supplier is accredited to the 2017 edition of ISO/IEC 17025 and there has been no observed impact to the performance of the cables. Prysmian initiated CAR No. 879077 to address this issue.

During the review of the technical evaluation for the compound material use for the

cables, the NRC inspection team noted that Prysmian identified limited oxygen index, thermal degradation, and specific gravity as critical characteristics required to be tested for verification and the acceptance criteria would be the applicable standard from the American Society for Testing and Materials. Prysmian selected a “Normal” sample plan and the sample size based on the lot size in accordance with the Electric Power Research Institute (EPRI) Technical Report (TR) TR-017218-R1, “Guideline for Sampling in the Commercial-Grade Item Acceptance Process,” dated January 1999. The NRC inspection team proceeded to ask Prysmian to provide the technical basis for the sampling plan and sample size selected. Prysmian uses procedure No. QA-806, “Sampling,” Revision 17, dated April 25, 2022, as guidance for selecting the sample plans and sample sizes. QA-806 states, in part, that “Lot homogeneity for compounds, conductor, work in-process and finished good shall be required.” It further states, in part, that “A selection of samples wherein every unit in the lot has an equal chance to be drawn regardless of its position, quality, appearance or location. Samples are selected in a random fashion from the same homogenous lot.”

During discussions with Prysmian staff, the NRC inspection team noted that Prysmian did not have any documented objective evidence to support that the commercial suppliers had established lot/batch control. When or lot/batch control is used as the technical basis for the selection of the sampling plan and sample size, it should be supported by documented objective evidence to show that the commercial suppliers have established adequate traceability controls and that these controls are effectively implemented. The NRC inspection team determined this issue to be minor because Prysmian performs additional tests and inspections as part of the CGD process, and the results of these tests and inspections demonstrate that the critical characteristics were adequately controlled. Prysmian initiated CAR No. 879074 to address this issue.

2. 10 CFR Part 21 Program

   a. Inspection Scope

      The NRC inspection team reviewed Prysmian’s policies and implementing procedures that govern the implementation of its 10 CFR Part 21, “Reporting of Defects and Noncompliance,” program to verify compliance with the regulatory requirements. The NRC inspection team evaluated the 10 CFR Part 21 postings and a sample of Prysmian’s POs to verify compliance with the requirements. The NRC inspection team reviewed a sample of Prysmian’s 10 CFR Part 21 evaluations to verify compliance with the requirements of 10 CFR 21.21, “Notification of Failure to Comply or Existence of a Defect and its Evaluation.” The NRC inspection team also verified that Prysmian’s nonconformance and corrective action procedures provide a link to the 10 CFR Part 21 program.

      The NRC inspection team also discussed the 10 CFR Part 21 program with Prysmian’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 Prysmian 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 Prysmian is adequately implementing its policies and procedures associated with the 10 CFR Part 21 program. No findings of significance were identified.

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

a. Inspection Scope

The NRC inspection team reviewed Prysmian's policies and implementing procedures that govern the implementation of its 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 verified that Prysmian's processes and procedures provide for the identification, documentation, segregation, evaluation, and disposition of nonconforming items. These processes also apply the principles of repair, return to supplier, rework, scrap, and use-as-is.

The NRC inspection team reviewed a sample of Nonconforming Material (NCM) Reports and confirmed that Prysmian: (1) dispositioned the NCMs in accordance with the applicable procedures; (2) documented an appropriate technical justification for the dispositions; and (3) took adequate corrective action regarding the nonconforming items to prevent recurrence.

The NRC inspection team also reviewed a sample of Customer Conformance Process (CCP) and CARs and confirmed that the CARs contained: (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; (3) direction for review and approval by the responsible authority; (4) a description of the current status of the corrective actions; and (5) the actions taken to verify timely and effective implementation of the corrective actions.

In addition, the NRC inspection team reviewed Prysmian's (previously known as General Cable) corrective actions in response to the inspection findings identified in the NRC's inspection report (IR) No. 99900227/2015-201, dated March 23, 2015 (ADAMS Accession No. ML15063A055).

The NRC inspection team discussed the nonconforming materials, parts, or components and corrective action programs with Prysmian'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

b1. Corrective Action Associated with Violation 99900227/2015-201-01

Following the February 2015 inspection of Prysmian as documented in NRC IR No. 99900227/2015-201, the NRC issued Violation 99900227/2015-201-01 for Prysmian's failure to adequately evaluate a deviation identified through a Nuclear Industry Assessment Committee audit. Specifically, hot creep, which is listed as a critical characteristic in qualification test document EP-XII-5, "Low voltage nuclear Ultrol Class 1E and non-Class 1E cables," was not tested as per Insulated Cable Engineers Association (ICEA) document T-27-581, "Test method for measurement of hot creep of polymeric insulations," in six POs. EP-XII-5 stated, in part, that "verification of the cable's hot creep (both elongation and set) will ensure that the item was crosslinked in the manufacturing process and the cable will last its qualified life." Prysmian evaluated that a solder iron test would be adequate to meet the testing requirements as stated by the ICEA standard. This go, no-go test was not sufficient to verify the critical characteristic of quantitatively measuring the elongation and set for crosslinking and qualified life purposes.

Prysmian issued CCP No. 755794 to address this issue. In its response letter dated April 20, 2015 (ADAMS Accession No. ML15117A043), Prysmian stated that seven customers were affected by the evaluation, and one of the seven cables in question was obtained and tested to show the cable fully met the hot creep requirements of ICEA T-27-581. Prysmian committed to contacting the remaining six customers and test the cables in question to confirm the hot creep performance met specified requirements, and in the event that samples are not available, Prysmian committed to performing a technical analysis to show that the product was sufficiently crosslinked to satisfy the hot creep requirement. Prysmian issued a formal report of its findings dated June 18, 2015, (ADAMS Accession No ML15187A038). Four samples from the six customers were received, tested, and met the hot creep requirements of ICEA T-27-581. For the two customers without samples, Prysmian provided adequate justification using technical analysis to conclude that the insulation from the remaining two orders were effectively crosslinked to meet specifications. During the inspection, the NRC inspection team observed the Crosslink Proof Test (Hot Creep) for Work Order 230467.000 to verify that Prysmian continues to meet the hot creep requirements of ICEA T-27-581.

The NRC inspection team determined that Prysmian's corrective actions were adequately implemented to address Violation 99900227/2015-201-01. Based on its review, the NRC inspection team closed Violation 99900227/2015-201-01. No findings of significance were identified.

b2. Corrective Action Associated with Nonconformance 99900227/2015-201-02

Following the 2015 inspection of Prysmian, the NRC issued Nonconformance 99900227/2015-201-02 for Prysmian's failure to ensure that assumptions from design qualification reports were correctly translated into certificates of conformances sent to their customers. Specifically, certificates of conformances to Duke Energy Process PO Nos. 00108282 and 00181215, stated, in part, that "By virtue of testing performed on the core conductors, cable supplied under PO 00108282 and 00181215 qualified per Institute of Electrical and Electronics Engineers (IEEE) 383-1974 as Class 1E material. It is also certified that the material supplied meets the requirements of IEEE 323-1974 as

tested on the qualification reports F-C5120-1 and F-C5120-3. When used as Class 1E material inside containment, it is recommended that the polyvinyl chloride (PVC) jacket be removed." However, Duke Energy Process required the cable jackets to be PVC, which was not evaluated or qualified to IEEE 323, "IEEE Standard for Qualifying Class 1 E Equipment for Nuclear Power Generating Stations" or IEEE 383, "IEEE Standard for Type Test of Class 1E Electric Cables, Field Splices, and Connections for Nuclear Power Generating Stations" by Prysmian. The certificate of conformance statement did not adequately state the cable's qualified conditions for use which would require the removal of the PVC jacket inside containment (inside containment is an unanalyzed condition).

Prysmian issued CCP No. 755801 to address this issue. In its response letter dated April 20, 2015, Prysmian stated that "the cable was analyzed by Duke Energy Process to confirm that the cable would perform its function as specified, and that it would not place the plant in an unanalyzed condition." Prysmian confirmed that the qualification per F-C5120-1 and F-C5120-3 qualified insulated conductors to meet IEEE 323-1974 and IEEE 383-1974, and therefore, considered acceptable for the intended application. In addition, based on an agreement between Prysmian and Duke Energy Process, all Certified Test Reports (CTRs) issued in the future shall state, "By virtue of testing performed on the core conductors, cable supplied under P.O. _____ qualifies per IEEE 383-1974 as Class 1E material." The NRC inspection team verified this statement on a sample of P.O. from Duke Energy Process.

The NRC inspection team determined that Prysmian's corrective actions were adequately implemented to address Nonconformance 99900227/2015-201-02. Based on its review, the NRC inspection team closed Nonconformance 99900227/2015-201-02. No findings of significance were identified.

b3. Corrective Action Associated with Nonconformance 99900227/2015-201-03

Following the 2015 inspection of Prysmian, the NRC issued Nonconformance 99900227/2015-201-03 for Prysmian's failure to take measures to review for suitability that ensures that original type testing performed for safety-related cables envelope customer qualification requirements. Specifically, Prysmian failed to adequately evaluate whether qualification testing performed by Franklin Research Center conformed to the specified testing requirements. Additionally, Prysmian failed to adequately verify that all instruments, and other M&TE devices used in activities affecting quality were properly controlled, calibrated, and adjusted at specified periods to maintain accuracy within necessary limits. Specifically, qualification report F-C5120-1 for Class 1E cable qualified cables to IEEE 323-1974 and IEEE 383, states, in part, that all qualification testing was performed August through December 1979. However, the Hipotronics alternating current (AC) dielectric test set, which was the sole test equipment used for dielectric testing, was calibrated January 21, 1980. There is no documented evidence that the AC dielectric test set was calibrated before the five-minute AC high potential withstand test to ensure that the insulation met the requirements post steam line break and loss of coolant accident environment.

Prysmian issued CCP No. 755802 to track these issues. In its response letter dated April 20, 2015, Prysmian stated that "two (2) test instruments, a Beckman Instruments Breakdown Test Set, and a Hipotronics AC Dielectric Test Set, are listed in the report as shown in Table 1 that were available to be used. These two Dielectric Test Sets are

capable of performing the required [dielectric] tests." The NRC inspection team reviewed the objective evidence that the use of the Beckman Instruments Breakdown Test Set (ID No. 4217507) was used for all testing and was within the "project specific" period. The calibration of the Beckman Instruments Breakdown Test Set was within the correct range meeting the requirements, and the Hipotronics AC Dielectric Test Set (ID 18299) calibrated after "the Period of Test Program" was not used for the required testing.

The NRC inspection team determined that Prysmian's corrective actions were adequately implemented to address Nonconformance 99900227/2015-201-03. Based on its review, the NRC inspection team closed Nonconformance 99900227/2015-201-03. No findings of significance were identified.

c. Conclusion

The NRC inspection team concluded that Prysmian 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, the NRC inspection team also determined that Prysmian is implementing its policies and procedures associated with its nonconforming materials, parts, or components and corrective action programs. No findings of significance were identified.

4. Design Control

a. Inspection Scope

The NRC inspection team reviewed Prysmian's policies and implementing procedures that govern the implementation of its design control program to verify compliance with the regulatory requirements of Criterion III of Appendix B to 10 CFR Part 50. Prysmian is the original equipment manufacturer (OEM) of the Class 1E low and medium low voltage cables and Non-Class 1E safety significant low and medium voltage cables under their ULTROL 60+ manufacturing lines. As the OEM, Prysmian confirmed that there have not been any significant design changes.

The NRC inspection team reviewed Prysmian's processes for performing design and configuration control, including design reviews and design changes. The NRC inspection team reviewed design documentation (e.g., design drawings, manufacturing specifications, etc.) associated with the safety-related cables. All of the design inputs and design requirements are documented in a manufacturing specification, which then become the documents used for the design and manufacturing of the safety-related cables.

Prysmian controls design changes through the issuance of Engineering Change Notices (ECN). ECNs are required for any revision or change to manufacturing specifications and include the design change, evaluation method, and documentation of the results. The NRC inspection team reviewed the most recent design changes and confirmed that they did not invalidate the qualified safety-related cable type with respect to its original design including the qualification for aging, radiation, and electrical properties. The NRC inspection team confirmed that the ECN process was conducted in accordance with Prysmian's implementing procedures, and the results of the design reviews were

adequately documented.

The NRC inspection team also reviewed a sample of environmental qualification reports for different cable configurations and verified that testing was performed in accordance with the relevant technical requirements and specifications (e.g., Institute of Electrical and Electronics Engineers, etc.), as applicable.

Overall, the NRC inspection team confirmed that (1) the appropriate technical requirements and quality standards were specified and included in design documents and drawings; (2) independent verifications and checks were integrated into the process and were being performed, and (3) design changes were being adequately controlled and implemented in accordance with Prysmian procedures.

The NRC inspection team also discussed the design control program with Prysmian'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 Prysmian is implementing its design control program in accordance with the regulatory requirements of Criterion III of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team also determined that Prysmian is implementing its policies and procedures associated with the design control program. No findings of significance were identified.

5. Identification and Control of Materials, Parts, and Components

a. Inspection Scope

The NRC inspection team reviewed Prysmian's policies and implementing procedures that govern the implementation of its material identification and control program to verify compliance with the regulatory requirements of Criterion VIII, "Identification and Control of Materials, Parts, and Components," of Appendix B to 10 CFR Part 50. The NRC inspection team also observed the implementation of the material identification and control program by Prysmian's employees during in-process fabrication activities including receipt inspection, special testing, storage and inventory control, and machining of safety-related items. The NRC inspection team verified that all materials inspected were adequately marked with the appropriate lot, batch and/or heat numbers using the marking and labeling conventions in accordance with written procedures and instructions.

The NRC inspection team discussed the material identification and control program with Prysmian'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 Prysmian is implementing its material identification and control program in accordance with the regulatory requirements of Criterion VIII of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed and direct observation of material control practices in the manufacturing facility, the NRC inspection team also determined that Prysmian is adequately implementing its policies and procedures associated with the material identification and control program. No findings of significance were identified.

6. Control of Measuring and Test Equipment

a. Inspection Scope

The NRC inspection team reviewed Prysmian's policies and implementing procedures that govern the implementation of its M&TE program to verify compliance with the requirements of Criterion XII, "Control of Measuring and Test Equipment," of Appendix B to 10 CFR Part 50.

For a sample of M&TE, the NRC inspection team reviewed M&TE on the shop floor as well as reviewed the records for selected M&TE to ensure appropriate calibration stickers and current calibration dates, including the calibration due date. The NRC inspection team also verified that all M&TE reviewed during observed testing activities was properly calibrated, adjusted, and maintained at prescribed intervals prior to use. Calibration records reviewed by the NRC inspection team indicated the as-found or as-left conditions, accuracy required, calibration results, calibration dates, and the due date for recalibration. Furthermore, the NRC inspection team also verified that the selected M&TE were calibrated using procedures traceable to known industry standards.

The NRC inspection team confirmed that when M&TE equipment is found to be out of calibration, Prysmian generates an M&TE out-of-tolerance condition to identify items that have been accepted using this equipment since the last valid calibration date and to perform an extent of condition review. The NRC inspection team performed a walk-down of Prysmian's fabrication floor to observe that M&TE were labeled, handled, and stored in a manner that indicated the calibration status of the instrument and ensured its traceability to calibration test data.

The NRC inspection team discussed the control of M&TE with Prysmian'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 Prysmian is implementing its 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, the NRC inspection team also determined that Prysmian is implementing its policies and procedures associated with the M&TE program. No findings of significance were identified.

7. Internal Audits

a. Inspection Scope

The NRC inspection team reviewed Prysmian's policies and implementing procedures that govern its internal audits program to verify compliance with the requirements of Criterion XVIII, "Audits" of Appendix B to 10 CFR Part 50. The NRC inspection team reviewed Prysmian's internal audit plans, internal audit reports, and CARs generated during internal audits.

The NRC inspection team verified that the audit documents reviewed were adequately completed and that Prysmian adequately corrected the conditions identified in CARs generated during internal audits. The NRC inspection team verified that Prysmian's procedures described the scope and purpose of audits to be performed, the frequency, 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 that internal audits were performed using checklists.

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

8. Entrance and Exit Meetings

On May 22, 2023, the NRC inspection team presented the inspection scope during an entrance meeting with Mr. Chris Schnider, Prysmian's Plant Manager, and other members of Prysmian's management and technical staff. On May 26, 2023, the NRC inspection team presented the inspection results to Mr. Schnider and other members of Prysmian'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	Position	Affiliation	Entrance	Exit	Interviewed
Ghassan Ghrear	Quality Assurance Manager	Prysmian Group (Prysmian)	X	X	X
Chris Schnider	Plant Manager	Prysmian	X	X	
Alexis Mattio	Product Development Engineer	Prysmian			X
Paul Gottier	Cable Design Manager	Prysmian			X
Yukie Palmer	Quality Engineer	Prysmian	X	X	X
Travis Phillippi	Quality Engineer	Prysmian	X	X	X
Lisa Meagher	Quality Specialist	Prysmian	X	X	X
Craig Hodgins	Controller	Prysmian	X		
Walter Parsell	Facility Engineering Manage	Prysmian	X		
Noor Khan	Health, Safety and Environment Manager	Prysmian	X		
Jeremy Gustivus	Product Development Director	Prysmian	X		

Tom Leonard	Product Manager	Prysmian	X		
Aaron Armstrong	Inspection Team Leader	Nuclear Regulatory Commission (NRC)	X	X	
Dong Park	Inspector	NRC	X	X	
Yamir Diaz-Castillo	Inspector	NRC	X	X	
Yiu Law	Inspector	NRC	X*	X*	
Kerri Kavanagh	Branch Chief	NRC		X*	
*Remote participation					

2. INSPECTION PROCEDURES USED

- 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
- IP 36100, “Inspection of 10 CFR Part 21 and Programs for Reporting of Defects and Noncompliance,” dated February 10, 2023

3. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Item Number	Status	Type	Description
99900227/2023-201-01	OPENED	Nonconformance	Criterion VII
99900227/2015-201-01	CLOSED	Violation	Part 21
99900227/2015-201-02	CLOSED	Nonconformance	Criterion III
99900227/2015-201-03	CLOSED	Nonconformance	Criterion III

4. DOCUMENTS REVIEWED

Quality Assurance Procedures (QAP)

- “Nuclear Quality Assurance Manual,” Fifth Edition, Revision 30, dated April 14, 2023
- ANSI/NEMA WC 53/ICEA T-27-581-2020, “Standard Test Methods for Extruded Dielectric Power, Control, Instrumentation, and Portable Cables for Test,” dated February 7, 2020
- Insulated Cable Engineers Association (ICEA) T-28-562, “Test Method for Measurement of Hot Creep of Polymeric Insulations,” dated November 29, 2021
- EP-NUC-1, “Low Voltage Nuclear ULTROL 60+ Class 1E and non-Class 1E Cables,” Revision 1, dated August 19, 2022
- QA-822, “Reporting of Defects and Failures to Comply Under 10CFR21 and 10CFR50 55(e),” Revision 27, dated May 10, 2022
- QA-121, “Control of Non-Conforming Outputs,” Revision 57, dated August 25, 2022
- QA-828, “Corrective Action,” Revision 30, dated August 25, 2022
- QA-200, “Calibration Control of Monitoring and Measurement Equipment,” Revision 40, dated May 2, 2023
- QA-802, “Quality Audits,” Revision 44, dated August 23, 2022
- QC-802A, “Process Audits,” Revision 5, dated May 19, 2022
- OI-017, “Tensile Strength- Insulation,” Revision 2, dated August 2000
- OI-75, “Operating Instruction: Quality Checks – Irradiation,” Revision 5, dated December 2002

- OI-075, “Quality Checks- Irradiation,” Revision 3, dated August 2000
- OI-032, “IR/DCR Test,” Revision 5, dated July 24, 2013
- OI-038, “Insulation Resistance using a Manual Tester,” Revision 8, dated March 15, 2013
- PP-300, “Nuclear Grade Safety Related Materials/Services,” Revision 11, dated August 11, 2022
- Prysmian Group Nuclear Approved Supplier List
- EP-NUC-3, “Nuclear Design Control,” Revision 1, dated March 29, 2023
- EP-OP-1, “Operating Procedure for Cable Design Engineering,” Revision 2, dated March 2, 2023
- EP-OP-2, “Operating Procedure for Product Development Engineering,” Revision 1, dated August 5, 2020
- EOP-OP-3, “Engineering Change Notices (ECN),” Revision 2, dated July 15, 2022
- EOP-OP-4, “Manufacturing Specifications,” Revision 1, dated May 23, 2022
- EP-REQ-1, “Engineering Design Standard Manual,” Revision 1, dated February 2, 2021
- HH-POP-501, “Evaluation and Selection of External Providers,” Revision 10, dated September 26, 2019
- PP-300, “Nuclear Grade Safety Related Materials/Services,” Revision 11, dated June 3, 2022
- QA-086, “Sampling,” Revision 17, dated April 5, 2022
- QA-200, “Calibration Control of Monitoring and Measuring Equipment,” Revision 40, dated May 2, 2023
- QA-500, “Receiving and Service Inspection,” Revision 34, dated August 25, 2022
- QA-806, “Sampling,” Revision 17, dated April 25, 2022
- QA-814, “Contract Review, Product Quotations, Sales Order Entry & Change,” Revision 6, dated April 14, 2022

Design Documents

- Certificate of Compliance No. 53353-02-01 and Certified Test Data No. 53353-02-01 for cable specification GCC Nuclear Specification 175-60, ULTL60-S600TC-8-1-AP/SN, dated May 17, 2023
- GCC Nuclear Specification No. 175-60, “ULTROL 60+ Power Cable, Dual Wall, Single Conductor, Class 1E Nuclear,” dated May 2013
- Specification No. 13-EN-058, “Procurement Specification for 600 Volt Copper Power Cables - The Arizona Public Service Company - Palo Verde Nuclear Generating Station,” dated August 18, 1995
- Manufacturing Specification for Part No. 445200, Revision 1, dated March 3, 2022
- Manufacturing Specification for Part No. 37450 60, Revision 1, dated May 23, 2023
- Manufacturing Specification for Part No. 22560.16.4, Revision 11, dated September 17, 2020
- Manufacturing Specification for Part No. 445200, Revision 1, dated April 3, 2022
- Manufacturing Specification for Part No. 445120, Revision 1, dated January 27, 2022
- Drawing No. 02-6248, “1C 8AWG XLPE/XLPO 600V, ULTROL 60+ Class IE 90C Rated,” Revision 0, dated March 3, 2022
- Drawing No. 02-5449, “3/C 2AWG 600V XLPE/XLPO, ULTROL 60+ 600V Class 1E Rated,” Revision 5, dated March 29, 2023
- Drawing No. 02-6225, “75 Ohm Coax RG-59B/U Equivalent,” Revision 1, dated January 27, 2021

- Engineering Change Notice Nos. 63-1201-2023 and 63-961-2022
- New Order: Part Number Setup, ID No. 2122, Coat Jacket/OD Reduction, dated January 26, 2022
- Equivalency Report or ULTROL 60+ RG-59B/U Cable, dated February 2, 2023
- Technical Service Request (TSR) Resolution Summary, ITC No. 12412, dated November 10, 2022
- TSR Resolution Summary, ITC No. 9960, dated February 4, 2020
- TSR Resolution Summary, ITC No. 12101, dated May 31, 2022
- TSR Resolution Summary, ITC No. 12223, dated July 28, 2022
- TSR Resolution Summary, ITC No. 12102, dated May 31, 2022
- Certified Test Data No. 47427-01-01 for GCC Nuclear Specification No. 225-60, dated February 1, 2023
- Certified Test Data No. 772715-01-01 for GCC Nuclear Specification No. 225-60, dated December 10, 2021
- Certified Test Data No. 53353-02-01 for GCC Nuclear Specification No. 175-60, dated May 17, 2023
- ANSI/NEMA WC 53-2016, ICEA T-27-581-2016, “Standard Test Methods for Extruded Dielectric Power, Control, Instrumentation, and Portable Cables for Test,” dated April 7, 2016
- Report No. K-W2014-2, “LOCA/MSLB Environmental Qualification Report for 60 Year Service Life Class 1E ULTROL 60+ Los Voltage Insulated Single Conductor Cables and Low Voltage Jacketed Cables for Nuclear Power Plants,” Revision 3, dated February 29, 2016
- Report No. K-W2014-3, “HELB Environmental Qualification Report for 60 Year Service Life Class 1E ULTROL 60+ Voltage Insulated Single Conductor Cables, Low Voltage Jacketed Cables, and Non-Class 1E MV Cables For Nuclear Power Plants, Revision 2, dated February 29, 2016

Commercial-Grade Dedication (CGD)

- QA-841, “Dedication of Commercial Grade Components and Services for Low Voltage and Medium Voltage Safety-Related Applications,” Revision 12, dated May 20, 2022
- QC-841A, “Dedication of Commercial Grade Calibration/Testing Services for Safety-Related Applications,” Revision 8, dated April 23, 2022
- QCF-841A3, “Commercial Grade Inspection of Calibration Services - Critical Characteristics Worksheet,” Revision 7
- QCF-841A4, “Commercial Grade Inspection of Calibration Services - Critical Characteristics Worksheet,” Revision 1
- Technical Evaluation No. EP-NUC-1, “Low Voltage Nuclear ULTROL 60+ Class 1 E and non-Class 1E Cables,” Revision 1, dated August 19, 2022
- Technical Evaluation No. EP-NUC-2, “Medium Voltage Nuclear ULTROL 60+ Class 1E and Non-Class 1E Cables,” Revision 1 dated August 19, 2022
- Commercial-Grade Item Dedication Technical Evaluation - Calibration Services
- Commercial-Grade Item Dedication Technical Evaluation - Testing Services
- Commercial-Grade Dedication of 60 Year Low Voltage Cable Insulating Compound, Part No. 23-0907, Type NU932, dated July 11, 2022
- Commercial-Grade Dedication of 60 Year Low Voltage and Medium Voltage Cable Jacket Compound, Part No. 23-0908, Type NU965, dated August 30, 2022

- Commercial-Grade Dedication of Low Voltage Cable Primary Conductors, Part No. 50.0309.0003, lot No. 4231655, dated January 30, 2023
- Commercial-Grade Dedication of 60 Year Low Voltage Insulating Compound (NU-932), Part No. 23-0907, Type NU932, dated April 21, 2021
- Commercial-Grade Dedication of 60 Year Low Voltage Insulating Compound (NU-932), Part No. 23-0907, Type NU932, dated May 23, 2023
- Commercial-Grade Dedication of 60 Year Low Voltage and Medium Voltage Cable Jacket Compound, Part No. 23-098, Type NU965, dated August 30, 2022
- Commercial-Grade Dedication of Low Voltage Cable Primary Conductors, Part No. 50.0309.00003, Lot No. 4010726, dated December 10, 2021
- Survey of Commercial Grade Testing Services - Critical Characteristics Worksheet for a supplier of testing services, survey date October 4, 2022
- Survey of Commercial Grade Testing Services - Critical Characteristics Worksheet for a supplier of calibration services, survey date December 23, 2022
- Commercial-Grade Inspection of Calibration Certificates - Critical Characteristics Worksheet, Calibration Date January 1, 2022 - December 31, 2022
- Commercial-Grade Inspection of Calibration Certificates - Critical Characteristics Worksheet, Calibration Date August 10, 2022 - June 21, 2022
- Commercial-Grade Inspection of Calibration Certificates - Critical Characteristics Worksheet, dated November 12, 2012

Internal Audit

- Willimantic Nuclear Audit 2020, audit date August 11, 2020 to November 17, 2020
- Willimantic Nuclear Audit 2021, audit date July 12, 2021 to July 14, 2021
- Willimantic Nuclear Audit 2022, audit date November 17, 2022 to November 18, 2022
- Du Quoin Nuclear Audit 2022, audit date October 25, 2022 to October 27, 2022

Purchase Orders

- Purchase Order (PO) No. 137745 for calibration services, dated November 11, 2022
- PO No. SNA10305012 for a power cable, Revision 4, dated May 9, 2023
- PO No. 500655868 from APS Palo Verde, dated May 17, 2023
- PO No. 63-69637 for conductor material, Revision 1, dated June 23, 2021
- PO No. 63-150157 for conductor material, Revision 5, dated March 9, 2023
- PO No. 63-121724 for conductor material, Revision 6, dated January 12, 2023
- PO No. 1390144 for calibration services, Revision 1, dated May 17, 2023
- PO No. 1368930 for calibration services, Revision 1, dated July 18, 2022
- PO No. 1335910 for calibration services, Revision 1, dated May 14, 2021
- Nuclear PO Review for PO No. SNA10305012, Revision 4, dated May 17, 2023

Measuring and Test Equipment Documents

- Certificate of Calibration Nos. 123062122121212, 123062122125931, 123062122140241, 123062222091454, 123062222122222, for a tensile machine, dated June 21, 2022
- Certificate of Calibration No. A4887536 for an oven, dated January 20, 2023
- Certificate of Calibration No. 993530112023 for a high voltage cage, dated January 12, 2023

- Certificate of Calibration No. 07427001122023 for a high voltage cage, dated January 12, 2023
- Certificate of Calibration No. A4934785 for an insulation tester, dated February 23, 2023
- Certificate of Calibration No. WO-00414714 for a high resistance meter, dated March 29, 2023
- Certificate of Calibration No. A5060827 for a network analyzer, dated May 22, 2023
- Certificate of Calibration No. A4488365 for a 12-inch ruler, dated March 16, 2022
- Certificate of Calibration No. A5060290 for a 2,000 grams scale, dated May 22, 2023
- Certificate of Calibration No. A4962558 for a temperature indicator, dated March 14, 2023
- Certificate of Calibration No. A4558695 for a micrometer, dated May 9, 2022

Customer Conformance Process (CCP) / Corrective Action (CAR)

- CCP 755794, dated March 26, 2015
- CCP 755801, dated March 26, 2015
- CCP 755802, dated March 26, 2015
- CCP 838803, dated December 27, 2019
- CCP 838123, dated December 27, 2019
- CCP 838131, dated December 27, 2019
- CCP 850029, dated July 22, 2021
- CCP 850031, dated July 8, 2021
- CCP 850035, dated August 17, 2021
- CCP 850037, dated May 24, 2021
- CCP 850038, dated December 7, 2022
- CCP 850040, dated August 17, 2021
- CCP 850041, dated August 18, 2021
- CCP 850043, dated August 17, 2021
- CCP 850045, dated July 23, 2021
- CCP 850046, dated August 17, 2021
- CCP 850049, dated August 17, 2021
- CCP 850050, dated August 17, 2021
- CCP 859612, dated August 25, 2022
- CCP 877318, dated March 28, 2023
- CCP 877319, dated March 28, 2023
- CCP 877320, dated March 28, 2023
- CCP 877321, dated March 28, 2023
- CCP 874262, dated May 10, 2023
- CCP 874263, dated January 19, 2023
- CCP 874270, dated November 14, 2023
- CCP 877318, dated May 18, 2023
- CCP 877319, dated May 18, 2023
- CCP 877320, dated May 18, 2023
- CCP 877321, dated May 18, 2023

Corrective Action Reports Opened During the NRC Inspection

- CAR 879069, 879070, 879071, 879072, 879073, 879074, 879075, 879077

10 CFR Part 21 Documents

- 10CFR21 evaluation form for CCP 838803, dated December 27, 2019
- 10CFR21 evaluation form for CCP 838123, dated December 27, 2019
- 10CFR21 evaluation form for CCP 838131, dated December 27, 2019

Non-Conformance Material (NCM) Records

- Nuclear Non-Conforming Material NCM No. 01760
- N01751
- N03144
- N03471
- N03472
- N03587

Training Records

- Nuclear Training Record for Juan Salvador as of May 17, 2023
- Lead Auditor Qualifications and Certification Record for Ghassan Ghrear
- Auditor Qualification for Alexis Mattio
- Auditor Qualification for Roy Haller
- Auditor Qualification for Timothy Richards, Jr.
- Auditor Qualification for Virginia Proctor
- Auditor Qualification for Austin Vaterlaus
- Auditor Qualification for Lisa Meagher
- Auditor Qualification for Yukie Palmer

Miscellaneous

- Certified Test Data No. 945534-01-01
- Certified Test Data No. 782756-01-01
- Crosslink Proof Test (Weight & Calculation) for Work Order (WO) No. 230467.000
- Tubular T&E for WO No. 230467.000
- F-C5120-1, “Qualification tests of electrical cables in a simulated SLB and LOCA environment,” dated August 19, 1980