



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

June 30, 2025

EA-23-105

Donald Smith, Quality Assurance Director
Mistras Services
1480 James Parkway
Heath, OH 43056

SUBJECT: NUCLEAR REGULATORY COMMISSION VENDOR INSPECTION
REPORT OF MISTRAS SERVICES NO. 99902109/2025-201

Dear Mr. Smith:

On May 12 – 16, 2025, the U.S. Nuclear Regulatory Commission (NRC) staff conducted an inspection at the Mistras Services (hereafter referred to as Mistras) facilities in Trainer, PA. The purpose of the inspection was to assess Mistras' implementation of Confirmatory Order EA-23-105 (CO), dated May 22, 2024 (Agencywide Documents Access and Management System (ADAMS) Accession No ML24116A294), specifically to evaluate training, work processes, nuclear safety culture, safety conscious work environment (SCWE), and other activities at Mistras. In addition, the NRC inspection team evaluated Mistras' closure of the inspection findings documented in the NRC's inspection report No. 99902109/2023-201, dated June 9, 2023 (ADAMS No. ML23151A458).

The enclosed report presents the results of this inspection. This NRC inspection report does not constitute NRC's endorsement of Mistras' overall quality assurance (QA) or 10 CFR Part 21 programs.

Within the scope of this inspection, no violations or nonconformances were identified.

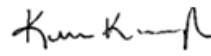
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Enclosure:
Inspection Report No. 99902109/2025-201
and Attachment

D. Smith

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Sincerely,



Signed by Kavanagh, Kerri
on 06/30/25

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

Docket No.: 99902109

EPID No.: I-2025-201-0002

SUBJECT: NUCLEAR REGULATORY COMMISSION VENDOR INSPECTION REPORT
OF MISTRAS SERVICES NO. 99902109/2025-201, DATE: June 30, 2025

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| DATE | 6/30/2025 | 6/26/2025 | |

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

Docket No.: 99902109

Report No.: 99902109/2025-201

Vendor: Mistras Services
Donald Smith
630-418-7301
donald.d.smith@mistrasgroup.com

Nuclear Industry Activity: Mistras Services provides nondestructive examination services of safety-related equipment to the commercial nuclear industry.

Inspection Dates: May 12 – 16, 2025

Vendor Location: 5 Nealy Boulevard
Trainer, PA 19061

Inspection Team Leader: Aaron Armstrong NRR/DRO/IQVB

NRC inspection team: Frankie Vega NRR/DRO/IQVB
Dori Willis OE/ET

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

Enclosure

EXECUTIVE SUMMARY

Mistras Services 99902109/2025-201

The U.S. Nuclear Regulatory Commission (NRC) staff conducted a reactive vendor inspection at the Mistras Services (hereafter referred to as Mistras) facility in Trainer, PA, to verify it had implemented the requirements of NRC Confirmatory Order EA-23-105 (CO), dated May 22, 2024. In addition, the NRC inspection team evaluated Mistras closure of the inspection findings documented in inspection report (IR) No. 99902109/2023-201, dated June 9, 2023 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML23151A458). This was the second NRC inspection at this facility. The NRC inspection team conducted this inspection on-site from May 12-16, 2025.

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

- Appendix B to 10 CFR Part 50
- 10 CFR Part 21
- Mistras' Confirmatory Order EA-23-105, dated May 22, 2024

During this inspection, the NRC inspection team implemented Inspection Procedure (IP) 43003, "Reactive Inspections of Nuclear Vendors," dated April 8, 2020, 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 results of this inspection are summarized below.

Inspection Areas

The NRC inspection team reviewed the corrective actions that Mistras implemented to address Violation 99902109/2023-201-01, Violation 99902109/2023-201-02 and Nonconformance No. 99902109/2023-201-03, as documented in inspection report No. 99902109/2023-201, dated June 9, 2023, and supplemented with later dated October 2, 2023. Based on this review, the NRC inspection team closed Violation 99902109/2023-201-01, Violation 99902109/2023-201-02 and Nonconformance No. 99902109/2023-201-03. In addition, the NRC inspection team determined that Mistras is implementing its 10 CFR Part 21 program for evaluating deviations and reporting defects that could create a substantial safety hazard in accordance with the applicable regulatory requirements. No findings of significance were identified in these areas.

Confirmatory Order EA-23-105

On May 22, 2024, the NRC issued Confirmatory Order EA-23-105 (CO) as a result of an agreement reached during an alternate dispute resolution (ADR) mediation session conducted in March 2023. The CO was issued in response to an NRC Office of Investigation that substantiated a violation of NRC requirements for falsification of calibration records for instruments used to examine the structural integrity of cranes at nuclear power plants. As part of the ADR settlement agreement, the Vendor committed to implement several actions associated with the QA program, SCWE and training at the site. NRC inspection team reviewed the documented objective evidence in response Mistras' CO. Specifically, the NRC inspection team conducted SCWE interviews of 7 of the employees from Mistras' Trainer, PA facility, to determine (1) the willingness of the employees to raise nuclear concern to management at Mistras (2) whether they received training on SCWE; and (3) whether they received training on 10 CFR 50.5 wrongdoing. The NRC inspection team reviewed the training conducted by Mistras to address safety culture and SCWE and reviewed Mistras' staff training records. In addition,

the NRC inspection team verified Mistras' revisions to their QA program and implementing procedures and reviewed internal audits reports, including audit plans and audit results, to assess the effectiveness of Mistras' QA program.

REPORT DETAILS

1. 10 CFR Part 21 Program

a. Inspection Scope

The U.S. Nuclear Regulatory Commission (NRC) inspection team reviewed Mistras Services (hereafter referred to as Mistras) 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. The NRC inspection team also evaluated the 10 CFR Part 21 postings and a sample of Mistras' purchase orders (POs) to verify 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 Mistras' 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 Mistras' 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

NOV 99902109/2023-201-01 and NOV 99902109/2023-201-02

Following the 2023 inspection at Mistras, the NRC issued NOV 99902109/2023-201-01 for Mistras' failure to adopt appropriate procedures to evaluate deviations to identify defects as soon as practicable in order to identify a reportable defect, were it to remain uncorrected, as required by 10 CFR 21.21(a)(1). Specifically, Mistras procedure 100-QC-017.1, "Reporting of Defects and Noncompliance in Accordance with 10 CFR Part 21 and 10 CFR 50.55(e)," Revision 5 did not contain accurate criteria for the evaluation of deviations to identify defects. As a result, Mistras failed to perform an adequate evaluation of the deviation related to its failure to ensure annual calibrations for the Acoustic Emission (AE) systems to determine whether a defect exists. The AE system is used during inspections of reactor head and internals lift rigs at multiple NRC licensee facilities.

In its response to the NOV 99902109/2023-201-01, Mistras provided a formal response to the NRC by letter dated October 31, 2023 (ADAMS ML23325A039). In its response, Mistras committed to revise Procedure 100-QC-017.1, Revision 6, to incorporate appropriate evaluation criteria consistent with guidance provided in RG 1.234, "Evaluating Deviations and Reporting Defects and Noncompliance Under 10 CFR Part 21," Revision 1, dated March 2024 (ADAMS ML24038A311). This document was also included in an internal audit the week of October 9, 2023. This audit identified a minor administrative error which was corrected in Revision 7 of procedure 100-QC-017.1. The NRC inspection team also reviewed procedure 100-QC-007.1 for the

establishment of Mistras' Nuclear Products Division (NPD) for safety related quality oversight of activities related to nuclear industry before the commencement of work activities.

The NRC also issued NOV 99902109/2023-201-02 for Mistras' failure to (1) evaluate a deviation to identify whether a defect existed within 60 days of its discovery as required by 10 CFR 21.21(a)(1) or (2) prepare and submit an interim report to the NRC within 60 days from discovery when an evaluation could not be completed within 60 days of discovery of the deviation as required by 10 CFR 21.21(a)(2).

In its response to the NOV 99902109/2023-201-02, Mistras provided a formal response to submit an interim report to the NRC as required by 10 CFR 21.21(a)(2). In addition, Mistras procedure 100-QC-017.1, "Reporting of Defects and Noncompliance in Accordance with 10 CFR Part 21 and 10CFR 50.55(e)," was completely revised to meet the requirement of 10 CFR Part 21 and better clarified the Part 21 timeline and reporting requirements. In addition, MISTRAS instituted a Nuclear Projects Division (NPD) to focus the Quality Department's assets on overseeing services provided to the nuclear power industry.

The NRC inspection team reviewed Mistras' corrective actions in response to NOV 99902109/2023-201-01 and NOV 99902109/2023-201-02. Mistras submitted its interim report and final Part 21 report to the NRC on October 20, 2023 (ML23296A086) and November 10, 2023 (ML23317A291) respectively. The NRC inspection team also reviewed and determined Mistras implementing procedure 100-QC-017.1, Revision 8, 100-QC-017, Revision 6 and 100-QV-007.1, Revision 1 to be adequate.

The NRC inspection team reviewed the documentation that provided the objective evidence the completion of the corrective actions was adequately implemented to address NOV 99902109/2023-201-01 and NOV 99902109/2023-201-02. Based on its review, the NRC inspection team closed NOV 99902109/2023-201-01 and NOV 99902109/2023-201-02.

c. Conclusion

The NRC inspection team concluded that Mistras' 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 Mistras is implementing its policies and procedures associated with the 10 CFR Part 21 program. No findings of significance were identified.

2. Organization

a. Inspection Scope

The NRC inspection team reviewed Mistras' policies and implementing procedures that govern the establishment and execution of Mistras' quality assurance program to verify compliance with the requirements of Criterion I, "Organization," 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 reviewed the organizational structure and functional relationships of Mistras as described in the Mistras 100-QAP-001, Quality Manual, Revision 10. The NRC

inspection team verified that the organizational description addressed the organizational structure, functional responsibilities, level of authority, and interfaces among different parts of the organization. The NRC inspection team also reviewed qualifications, responsibilities, and duties of personnel performing activities affecting quality. The NRC inspection team reviewed a sample of documents, reports, job travelers, and procedures to verify that that persons and organizations performing quality assurance functions report to a management level so that the required authority and organization freedom, including sufficient independence from cost and schedule when opposed to safety considerations, are provided.

Additionally, the NRC inspection team discussed Mistras' quality assurance (QA) program and organizational structure with Mistras' 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

NON 99902109/2023-201-03

Following the 2023 inspection at Mistras, the NRC issued NON 99902109/2023-201-03 for Mistras' failure to ensure that its QA organization has adequate authority and span of control to ensure QA functions are adequately performed by individuals with organizational freedom, including sufficient independence from cost and schedule, as defined in Mistras' QA Manual. Specifically, the Mistras' Quality Manager: (1) delegated QA functions to individuals within Mistras that did not have sufficient independence from cost and schedule to perform the QA functions, and (2) failed to retain responsibility of the QA functions.

In its response to the NON 99902109/2023-201-03, Mistras initiated CAR No.100-2023.03.28 (536). Mistras also provided a formal response to the NRC by letter dated July 7, 2023 (ADAMS ML23212A951). In its response, Mistras committed to revise the following procedures: 100-QC-006 "Contract Review and Project Planning" dated July 6, 2023, and 100-QC-007 "Project Execution" dated July 6, 2023, to explicitly state that the Quality Manager shall review nuclear project records and sign Contract Review/Job Traveler records and review reports and other quality related records. In addition to these procedure revisions, Mistras committed to develop a process to involve the Corporate Quality Group in all nuclear projects. Mistras also committed to create the Nuclear Projects Division (NPD) which focused on oversight of nuclear projects. This oversight includes, but is not limited to, contract review and incorporates pre-project and post-project hold points for associated records, including personnel qualification and certification records being assembled into detailed Certification Packages, and reviewed prior to assignment on nuclear safety related projects.

The NRC inspection team reviewed Mistras' corrective actions in response to NON 99902109/2023-201-03. Specifically, the NRC inspection reviewed updates to procedures 100-QC-006 and 100-QC-007. The NRC inspection team also reviewed procedure 100-QC-007.01 "Nuclear Projects," Revision 1, dated December 1, 2023, which details additional quality oversight of activities performed in support of, or directly for, the nuclear power licensees and defines the roles and responsibilities of the Nuclear Project Division (NPD). The NRC inspection team also reviewed two recently completed safety-related jobs packages (i.e., P.O.s, contract review forms, travelers and reports) and verified

Mistras' implementation of oversight activities documented in Mistras QA procedures. These actions provide reasonable assurance that an adequate level of oversight will be provided to nuclear projects to ensure compliance with applicable requirements.

The NRC inspection team reviewed the documentation that provided objective evidence the completion of the corrective action was adequately implemented to address NON 99902109/2023-201-03. Based on its review, the NRC inspection team closed NON 99902109/2023-201-03.

No findings of significance were identified.

c. Conclusion

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

3. Mistras Services – Confirmatory Order EA-23-105

a. Inspection Scope

On May 22, 2024, the NRC issued Confirmatory Order EA-23-105 (CO) as a result of an agreement reached during an alternate dispute resolution (ADR) mediation session conducted in March 2023. The CO was issued in response to an NRC Office of Investigation report that substantiated a violation of NRC requirements for falsification of calibration records for instruments used to examine the structural integrity of cranes at nuclear power plants. As part of the ADR settlement agreement, Mistras committed to implementing several actions associated with the SCWE. During the current inspection, the NRC inspection team conducted SCWE interviews of 7 employees from Mistras Trainer, PA site, to determine (1) the willingness of the employees to raise nuclear concern to management at Mistras; (2) whether they received training on SCWE; and (3) whether they received training on 10 CFR 50.5 wrongdoing. The NRC inspection team reviewed the developed training conducted by Mistras to address safety culture and SCWE and reviewed Mistras' staff records for the training. In addition, the NRC inspection team verified Mistras' revisions to their QA program and implementing procedures and reviewed internal audits reports, including audit plans and audit results, to assess the effectiveness of Mistras' QA program.

b. Observations and Findings

The NRC inspection team reviewed the implementation of the Mistras' actions taken as required by CO EA-23-105 in response to former employees who engaged in deliberate misconduct by falsifying certificates of calibration for nondestructive test equipment that was used at nuclear power plants. The NRC inspection team found that the elements of the CO were implemented within the time constraints specified in the CO. The following includes requirements of Section V of the CO, and the NRC inspection team observation:

Section V

1. Safety Culture and Safety Conscious Work Environment

Section V,1,a.

Mistras will maintain a clear and enforceable policy (e.g., code of conduct) for safety culture and safety conscious work environment (SCWE).

Section V,1,b.

Within 60 days of the issuance of this CO, Mistras will review its policy for safety culture and SCWE for consistency with the NRC's May 2011 Safety Culture Policy Statement and associated traits, the NRC's May 1996 Safety Conscious Work Environment Policy Statement, and the NRC's Regulatory Issue Summary 2005-18, "Guidance for Establishing and Maintaining a Safety Conscious Work Environment." Mistras will document the results of this review.

Section V,1,c.

Within 90 days of the issuance of this CO, Mistras will communicate to its employees its policy for safety culture and SCWE, if any changes are made based on the results of the review from Condition 1.b.

Section V,1,d.

Mistras will provide indoctrination and annual refresher training on Mistras' policy for safety culture and SCWE. Mistras will maintain a record of the individuals receiving training and the date of the training.

Section V,1,e.

Mistras will conduct a survey to assess the effectiveness of Mistras' policy for safety culture and SCWE taking into consideration the May 2011 NRC Safety Culture Policy Statement and associated traits on a periodic basis with a minimum frequency of two years.

NRC Observations

Sections V,1,a. and V,1,e. requires proper implementation of the CO requirements related to Mistras' safety culture and SCWE. To verify these requirements the NRC inspection team verified the following elements: (1) interviewed Mistras employees, (2) reviewed Mistras policy for nuclear safety culture and SCWE to verify content required by CO incorporated, (3) reviewed "Read and Sign" records, and (4) reviewed training material completed by Mistras. The NRC inspection team determined that the agreed upon elements of the CO related to Mistras' policy for nuclear safety culture and SCWE program were implemented, however, the NRC's Nuclear Safety Culture Policy was not referenced in the policy. Mistras issued corrective action number CAR-2025.05.15(772) to address this observation. The NRC inspection team verified that elements CO Section V,1,a. through V,1,d. was completed within the time constraints specified in the CO. The NRC inspection team determined that CO Section V,1,e. is not required to be completed at this time.

The NRC inspection team concluded that conditions Section V,1,b. and V,1,c. of the CO are satisfied, and that conditions CO Section V,1,a. and V,1,e. are open. The NRC inspection team determined that compliance has been achieved for the condition CO Section V,1,d. of the CO.

2. Quality Assurance Program

Section V,2,a.

Within 90 days of the issuance of this CO, Mistras will review, revise as necessary, and implement its Quality Manual and implementing procedures to ensure that they are compliant with 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." At a minimum, the Quality Manual will address the following criteria within Appendix B to 10 CFR Part 50:

- i. Criterion I, "Organization"
- ii. Criterion II, "Quality Assurance Program"
- iii. Criterion IV, "Procurement Document Control"
- iv. Criterion V, "Instructions, Procedures, and Drawings"
- v. Criterion VII, "Control of Purchased Material, Equipment, and Services,"
- vi. Criterion IX, "Control of Special Processes,"
- vii. Criterion XII, "Control of Measuring and Test Equipment,"
- viii. Criterion XV, "Nonconforming Materials, Parts, and Components,"
- ix. Criterion XVI, "Corrective Actions"
- x. Criterion XVII, "Quality Assurance Records,"
- xi. Criterion XVIII, "Audits"

Section V,2,b.

Mistras will maintain the Quality Manual and implement procedures to ensure that they remain compliant with Appendix B to 10 CFR Part 50.

NRC Observations

CO Sections V,2,a. and V,2,b. directed Mistras to, within 90 days of the issuance of this CO, to revise as necessary, and implement its Quality Manual and implementing procedures to ensure that they are compliant with Appendix B to 10 CFR Part 50. The CO also directs Mistras to maintain the Quality Manual and implementing procedures to ensure that they remain compliant with Appendix B to 10 CFR part 50. The NRC inspection team reviewed Mistras' assessment documenting its review of their current quality assurance program manual (QAPM) and associated procedures. This assessment was documented in Mistras' policy review form dated August 19, 2024. Mistras reviewed specific QAPM sections and linked each of these sections with the most recent revision of its implementing procedures. Some of these procedures were revised because of NRC findings identified in an NON and NOV documented in the 2023 NRC inspection report. The NRC inspection team reviewed the most updated revisions of the implementing procedures referenced in Mistras response to CO Section V,2,a. and V,2,b. Based on the reviews of these procedures, review of recently completed safety related jobs and discussions with Mistras QA director, the NRC inspection team determined these procedures were adequate, were adequately implemented and were determined to be compliant with Appendix B to 10 CFR Part 50. In addition, Mistras nuclear quality assurance program was audited by an external party in 2023 and 2024 and the lead auditor concluded that Mistras' QA program has been effectively implemented. The NRC inspection assessment of Mistras' 2023 and 2024 internal audits is provided in the "Internal Audits" section of this inspection report. The NRC inspection team determined that conditions in CO Section V,2,a. and V,2,b. are satisfied.

3. Audits

Section V,3,a.

Within 1 year of the issuance of this CO, Mistras will have a comprehensive audit performed of its Nuclear Quality Assurance Program, including the in-house and in-field activities affecting quality. This audit shall be performed by an independent, contracted entity that is knowledgeable in Appendix B to 10 CFR Part 50 and 10 CFR Part 21.

Section V,3,b.

Within 60 days of the completion of Condition 3.a, Mistras will submit to the NRC the audit report(s) and Mistras' written response to the audit report. Mistras' written response will either address how it will implement each recommendation and corrective actions of the audit report, including a proposed timeline; or provide an explanation and justification for why each recommendation and corrective action will not be implemented.

NRC Observations

Sections V,3,a. and V,3,b. of the CO directed Mistras to perform a comprehensive audit of its Nuclear Quality Assurance Program, including the in-house and in-field activities affecting quality within 1 year of the CO issuance date. It also directs Mistras to submit an audit report and Mistras written response to the audit report. This written response will either address how it will implement each recommendation and corrective actions of the audit report, including a proposed timeline; or provide an explanation and justification for why each recommendation and corrective action will not be implemented.

The NRC inspection team reviewed the results of the comprehensive audit required by Section V,3,a & V,3,b of the CO. These results were provided to the NRC in a report dated January 16, 2025 (ADAMS ML25029A199). The report contains three parts: 1). Mistras' Internal Audit Checklist, 2). Independent QA Auditor's Report, and 3). Mistras' Response to the Findings of the Internal Audit.

The NRC inspection team verified that Mistras procedures described the scope and purpose of audits to be performed, the frequency, audit criteria, and corrective actions when required. The NRC inspection team reviewed the 2023 and 2024 internal audits and verified that the audit reports included: (1) audit plan; (2) audit results; (3) adequately documented objective evidence with the applicable requirements; and (4) a review by Mistras' responsible management. The NRC inspection team verified that the internal audits were performed using the appropriate checklists and audits covered applicable aspects of Mistras Nuclear Quality Assurance Program, including the in-house and in-field activities affecting quality. The NRC inspection team also confirmed that these 2023 and 2024 internal audits were performed by an external lead auditor who was independent of the audited activities and was experienced and knowledgeable in the requirements of 10 CFR Part 50 Appendix B and 10 CFR Part 21. The NRC inspection team also verified that Mistras adequately initiated and corrected all findings identified during these internal audits. The NRC staff inspection team also confirmed that procedure 100-QC-0014 "Internal audits" was revised to include the requirements associated with performing independent internal audits at least annually.

The NRC inspection team identified the contractual agreement for the 2024 independent internal audit services provided by a third-party external auditor was not properly documented. This issue was considered to be minor by the inspection team since an audit plan was developed by the external auditor and approved by Mistras QA manager

before the audit was conducted. The audit plan included the scope of the audit, referenced Mistras' QAPM most recent revision and included applicable regulatory requirements. Also, Mistras provided objective evidence, including an invoice with audit costs provided by the auditing company and proof of payment by Mistras for such services. Mistras opened CAR-2025.05.15 (773) to address this issue.

The NRC inspection team determined that conditions in Sections V,3,a. and V,3,b. of the CO are satisfied.

Section V,3,c.

Thereafter, on a periodicity to not exceed three years, Mistras shall have a comprehensive audit performed of its Nuclear Quality Assurance Program as described in Condition 3.a of this CO. Mistras shall maintain records of the audit report as well as its written response that documents its implementation of the report's recommendations and corrective actions or provides an explanation and justification for why any recommendation and corrective action was not implemented.

Section V,3,d.

Mistras will perform comprehensive audits to verify compliance with all aspects of its Nuclear Quality Assurance Program, including the in-house and in-field activities affecting quality, and assess its effectiveness, on an annual basis. The audits shall be performed in accordance with written procedures or check lists by appropriately trained personnel not having direct responsibilities in the areas being audited. Audit results shall be documented and reviewed by management having responsibility in the area audited. Follow-up action, including reaudit of deficient areas, shall be taken where indicated.

The NRC inspection team reviewed QA implementing procedures including 100-QC-014 "Internal Audits," Revision 10, dated October 6, 2023, to verify that requirements described in CO Sections V,3,c. and V,3,d. have been incorporated into Mistras QA program. The NRC inspection team confirmed that implementing procedures include provisions to ensure internal audits are performed on an annual basis. Additional information on the NRC's inspection team review of Mistras internal audit program is included above.

The NRC inspection team determined that compliance has been achieved for conditions described in CO Section V,3,c. and V,3,d.

4. Quality Assurance Program Training for Employees Involved in Nuclear Safety-Related Activities.

Section V,4,a.

Within 60 days of the issuance of this CO, Mistras will create and deliver to its employees a statement from senior Mistras management highlighting the meaning of a nuclear worker's signature, the regulatory and legal significance of a signature, and the importance of ensuring activities affecting quality are accomplished in accordance with Mistras policies and procedures.

Section V,4,b.

Within 180 days of the issuance of this Confirmatory Order, Mistras will ensure that it has training that addresses:

- i. Compliance with 10 CFR 50.5 and 10 CFR 50.9 that:
 - 1. Emphasizes the importance of complete and accurate information for all required records, correspondence, and communications with the NRC and its licensees.
 - 2. Emphasizes individual accountability and clearly expresses that willful or deliberate failures to comply with regulations, CO, or contractual requirements could result in significant individual enforcement action by the NRC or Department of Justice.
 - 3. Reinforces that if any individual recognizes a noncompliance, they will immediately report the observation of the non-compliance to management.

- ii. Compliance with Mistras Quality Manual and implementing procedures. This training shall encompass changes resulting from Condition 1 of this CO.

Section V,4,c.

Within 1 year of the issuance of this CO, training prescribed in Condition V,4,a. and V,4,b. shall be presented to all Mistras employees involved in nuclear safety-related activities; thereafter, the training shall be presented annually.

Section V,4,d.

The training developed in Condition V,4,b. of this Section shall be reviewed and updated, as needed, at a frequency not to exceed 24 months.

NRC Observations

CO Section V,4,a. through CO Section V,4,b. directs Mistras to create and deliver to its employees a statement from senior Mistras management highlighting the meaning of a nuclear worker's signature, the regulatory and legal significance of a signature, and the importance of ensuring activities affecting quality are accomplished in accordance with Mistras policies and procedures. It also directs Mistras to develop training to ensure its employees comply with 10 CFR 50.5, 10 CFR 50.9 and its Quality Manual and implementing procedures. The NRC inspection team reviewed objective evidence presented by Mistras to address the requirements in CO Section V,4,a. through CO Section V,4,b. This objective evidence included a memorandum titled "Importance of Accurate, Ethical Record Keeping" sent to all employees by the Chairman and CEO of Mistras on July 17, 2024. The NRC inspection team also witnessed the entire training given to all employees to create awareness on safety culture, emphasizing the importance of compliance with 10 CFR 50.5 and 50.9, and its QAPM and implementing procedures. The NRC inspection team also reviewed training records demonstrating Mistras' employee's attendance and completion of such training.

The NRC inspection team determined that conditions in CO Section V,4,a. and V,4,b. are satisfied.

CO Section V,4,c. and V,4,d. directed Mistras to implement training prescribed in Condition V,4,a. and V,4,b. shall be presented to all Mistras employees involved in nuclear safety-related activities; thereafter, the training shall be presented annually, and the training will be revised and updated as required not to exceed 24 months. The NRC inspection team reviewed objective evidence presented by Mistras to address the requirements in CO Section V,4,c. and V,4,d. The NRC inspection team reviewed employees training certificates from Mistras' training implementation given to Mistras employees.

The NRC inspection team determined that compliance has been achieved for conditions described in CO Sections V,4,c. and CO section V,4,d of the CO.

c. Conclusion

As stated above, the NRC inspection team concluded that Mistras' is effectively implementing the requirements included in Section V of CO EA-23-105. Some requirements remain open and have ongoing actions. No findings of significance were identified.

4. Entrance and Exit Meetings

On May 12, 2025, the NRC inspection team presented the inspection scope during an entrance meeting with Mr. Donald Smith, Mistras Group Quality Assurance Director, and other members of Mistras management and technical staff. On March 16, 2025, the NRC inspection team presented the inspection results to Mr. Smith and other members of Mistras 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 |
|-----------------|----------------------------|--------------------|-----------------|-------------|--------------------|
| Donald Smith | Quality Assurance Director | Mistras Group | X | X | X |
| Rick Wick | Quality Assurance Manager | Mistras Services | X | X | X |
| Jack Howrath | | Mistras Services | | | X |
| Gia Monillas | | Mistras Services | | | X |
| Dave Millhausen | | Mistras Services | | | X |
| James Barragree | | Mistras Services | | | X |
| Aaron Armstrong | Lead Inspector | NRC | X | X | |
| Frankie Vega | Inspector | NRC | X | X | |
| Andra Keim | Acting Branch Chief | NRC | | X* | |

* - Attended virtually

2. INSPECTION PROCEDURES USED:

- Inspection Procedure (IP) 43003, “Reactive Inspections of Nuclear Vendors,” dated April 10, 2020
- 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 |
|----------------------|--------|---------------------------|--------------------------------------|
| 99902109/2023-201-01 | Closed | Notice of Violation (NOV) | 10 CFR 21.21, paragraphs (a) and (d) |
| 99902109/2023-201-02 | Closed | NOV | 10 CFR 21.21(b) |
| 99902109/2023-201-03 | Closed | Notice of Nonconformance | Criterion I of Appendix B |

4. DOCUMENTS REVIEWED

Quality Assurance and Work Procedures

- 100-QAP-001 “Quality Manual,” Revision 10, dated October 23, 2019
- 100-QC-017 “Control of Nonconforming Items and Activities,” Revision 6, dated June 5, 2024
- 100-QC-002 “Quality Records,” Revision 6, dated October 2, 2024
- 100-QC-006 “Contract Review and Project Planning,” Revision 7, dated July 6, 2023
- 100-QC-007.1 “Nuclear Projects,” Revision 1, dated December 1, 2023
- 100-QC-007 “Project Execution,” Revision 3, dated July 6, 2023
- 100-QC-017.1 “Reporting of Defects and Noncompliance in Accordance with 10 CFR Part 21 and 10CFR50.55(e),” Revision 8, dated June 5, 2024
- 100-QC-017 “Control of Nonconforming Items and Activities,” Revision 6, dated June 5, 2024
- 100-QC-014 “Internal Audits,” Revision 10, dated October 6, 2023
- 100-QC-004 “Management Review, Revision 4, dated February 1, 2018
- 100-QC-014.1, “Training, Qualification and Certification of Auditors,” Revision 4, dated October 6, 2023.

PO, Job travelers and contract review forms reviewed

- PO 70359731 dated September 18, 2019
- Job traveler WO# 41352006, November 07, 2024
- PO 7605027, dated March 14, 2024
- Job traveler #7605027, dated December 17, 2024
- Contract Review Record Job number #7605027, dated March 14, 2024

Internal audit reports:

- Mistras Services 2024 Internal audit number 100-QA-202410 report, dated January 16, 2025
- Mistras Internal Audit Plan, Audit No. 100-QA-202410, October 22, 2024
- Mistras Services 2024 Internal audit checklist, signed November 20, 2024
- 100-QC-013, "Control of Measuring and Test Equipment," revision 5.1, dated February 3, 2025.
- Mistras Internal Audit Plan, Audit No. 100-QA-202310, October 10, 2023
- Mistras Services 2023 Internal audit checklist, signed November 11, 2023
- Mistras Services Audit No. 100-QA-202310 report, dated November 11, 2023

CARs reviewed

- CAR 2023-07-07, dated July 7, 2023
- CAR-100-2023.03.09 (525), dated March 9, 2023
- CAR-100-2023.03.09 (527), dated March 9, 2023
- CAR-100-2023.03.09 (528), dated March 9, 2023
- CAR-100-2023.03.09 (529), dated March 9, 2023
- CAR-100-2023.03.28 (536), dated March 28, 2023

Training Records:

- Lead auditor qualification records – Bradley D. Boothe
- Auditor qualification records – Craig Bertrand