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

December 20, 2024

Ms. Anu Kulkarni
Quality Assurance Manager
United Controls International
205 Scientific Drive
Norcross, GA 30092

SUBJECT: NUCLEAR REGULATORY COMMISSION INSPECTION REPORT OF UNITED CONTROLS INTERNATIONAL, NO. 99901436/2024-201

Dear Ms. Kulkarni:

On November 4 - 8, 2024, the U.S. Nuclear Regulatory Commission (NRC) staff conducted an inspection at the United Controls International's (hereafter referred to as UCI) facility in Norcross, GA. The purpose of this limited-scope routine inspection was to assess UCI'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."

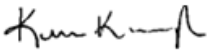
This technically-focused inspection specifically evaluated UCI's implementation of quality activities associated with the commercial-grade dedication and equipment qualification of electrical, electromechanical components/assemblies, control panels, various chemical gases, and other components, and design, repair, refurbish and reverse engineering of various items/assemblies for NRC's regulated facilities. The enclosed report presents the results of the inspection. In addition, the NRC inspection team evaluated UCI's closure of the inspection findings documented in the inspection report No. 99901436/2014-201, dated April 11, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14090A506). This NRC inspection report does not constitute NRC's endorsement of UCI's overall quality assurance (QA) or 10 CFR Part 21 programs.

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

In accordance with 10 CFR 2.390, "Public inspections, exemptions, requests for withholding," and the NRC's "Rule of Practice," a copy of this letter, its enclosure(s), and 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 at http://www.nrc.gov/reading-rm/adams.html.

Enclosure:
Inspection Report No. 99901436/2024-201
and Attachment

Sincerely,


Signed by Kavanagh, Kerri
on 12/20/24

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

Docket No.: 99901436

EPID No.: I-2024-201-0055

SUBJECT: NUCLEAR REGULATORY COMMISSION INSPECTION REPORT OF UNITED CONTROLS INTERNATIONAL, NO. 99901436/2024-201
DATE: December 20, 2024

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**ADAMS Accession No.:** ML24345A233 **NRR-106**

| | | | |
|---|---|---|---|
| **OFFICE** | NRR/DRO/IQVB | NRR/DRO/IQVB | NRR/DRO/IQVB |
| **NAME** | AArmstrong | YDiaz-Castillo | DZhang |
| **DATE** | 12/12/2024 | 12/16/2024 | 12/17/2024 |
| **OFFICE** | NRR/DRO/IQVB | NRR/DRO/IQVB | |
| **NAME** | RRomero-Devore | KKavanagh | |
| **DATE** | 12/12/2024 | 12/20/2024 | |

**OFFICIAL RECORD COPY**

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

| | |
|---|---|
| Docket No.: | 99901436 |
| Report No.: | 99901436/2024-201 |
| Vendor: | United Controls International<br>205 Scientific Drive<br>Norcross, GA 30092 |
| Vendor Contact: | Ms. Anu Kulkarni<br>Quality Assurance Manager<br>Phone: (770) 496-1406<br>Email: akulkarni@unitedcontrols.com |
| Nuclear Industry Activity: | United Controls International's scope of supply includes commercial-grade dedication and equipment qualification of motor control centers, control panels, power supply systems, programmable logic controller, compressed gasses, refrigerants, lubricants, and solvents. United Controls International also provides calibration, repair, welding, soldering, and acceptance testing services to NRC's regulated facilities. |
| Inspection Dates: | November 4 - 8, 2024 |
| Inspectors: | Aaron Armstrong — NRR/DRO/IQVB Team Leader<br>Deanna Zhang — NRR/DRO/IQVB<br>Yamir Diaz-Castillo — NRR/DRO/IQVB<br>Rebecca Romero-Devore — NRR/DRO/IQVB Trainee |
| Approved by: | Kerri Kavanagh, Chief<br>Quality Assurance and Vendor Inspection Branch<br>Division of Reactor Oversight<br>Office of Nuclear Reactor Regulation |

Enclosure

## EXECUTIVE SUMMARY

United Controls International
99901436/2024-201

The U.S. Nuclear Regulatory Commission (NRC) staff conducted a limited-scope routine vendor inspection at the United Controls International's (hereafter referred to as UCI) facility in Norcross, GA, 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 November 4 - 8, 2024. This was the second NRC inspection at this facility.

This technically-focused inspection specifically evaluated UCI's implementation of the quality activities associated with commercial-grade dedication (CGD) and equipment qualification of electrical, electromechanical components/assemblies, control panels, various chemical gases, and other components, and design, repair, refurbish and reverse engineering of various items/assemblies for NRC's regulated facilities. In addition, the NRC inspection team evaluated UCI's closure of the inspection findings documented in the inspection report No. 99901436/2014-201, dated April 11, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14090A506).

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; IP 36100, "Inspection of 10 CFR Part 21 and Programs for Reporting of Defects and Noncompliance," dated February 10, 2023, and IP 71152, "Problem Identification and Resolution," dated October 31, 2023.

The NRC inspection team observed the following specific activities:

- Receipt inspection and CGD acceptance activities on a sample of ring terminal lugs
- Seismic qualification testing of a relay coil
- Brazing of reactor pump cooling coils

The results of the inspection are summarized below.

Inspection Areas

The NRC inspection team determined that UCI established its programs for design control, CGD, procurement document control, supplier oversight, test control, control of measuring and test equipment, nonconforming materials, parts, or components, corrective action, and internal audits, in accordance with the applicable regulatory requirements of Appendix B to 10 CFR Part 50, as imposed in procurements documents by licensees. Based on the limited sample of

documents reviewed and activities observed, the NRC inspection team also determined that UCI is implementing its policies and procedures associated with these programs. No findings of significance were identified in these areas.

10 CFR Part 21 Program

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

Safety Conscious Work Environment

The NRC inspection team concluded that UCI's Safety Conscious Work Environment program (SCWE) and implementation were consistent with the NRC's guidance in Appendix 1, "Guidance for Gathering SCWE and PI&R Insights," of IP 71152. Based on the outcome of limited number of interviews conducted of selected individuals within the UCI organization, the NRC inspection team determined that the UCI staff are willing to raise nuclear safety concerns and the individuals' perception of their management's responsiveness to these concerns was positive. The UCI staff also indicated that they felt comfortable raising concerns to their supervisor and management, and elevating issues up through supervision or management if not appropriately addressed. The UCI staff can enter issues directly into the corrective action program or nonconformance program.

Corrective Action

The NRC inspection team reviewed the corrective actions that UCI took to address Violation No. 99901436-2014-201-01, documented in inspection report No. 99901436/2014-201, dated April 11, 2014. The NRC inspection team reviewed the documentation that provided the objective evidence that all of the corrective actions were completed and adequately implemented. Based on this review, the NRC inspection team closed Violation No. 99901436-2014-201-01.

## REPORT DETAILS

1. 10 CFR Part 21 Program

   a. Inspection Scope

   The U.S. Nuclear Regulatory Commission (NRC) inspection team reviewed United Controls International's (hereafter referred to as UCI) 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 evaluated the 10 CFR Part 21 postings and a sample of UCI's purchase orders (POs) to verify compliance with the requirements of 10 CFR 21.6, "Posting Requirements," and 10 CFR 21.31, "Procurement Documents." The NRC inspection team also verified that UCI's nonconformance and corrective action procedures provide a link to its 10 CFR Part 21 program.

   Furthermore, for a sample of 10 CFR Part 21 evaluations performed by UCI, the NRC inspection team verified that UCI had effectively implemented the requirements for evaluating deviations and failures to comply. The NRC inspection team verified that the notifications were performed in accordance with the requirements of 10 CFR 21.21, as applicable.

   The NRC inspection team discussed the 10 CFR Part 21 program with UCI'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

   Based on the samples reviewed, the NRC inspection team concluded UCI's policies and procedures are consistent with the requirements of 10 CFR Part 21. No findings of significance were identified.

2. Design Control and Commercial-Grade Dedication

   a. Inspection Scope

   The NRC inspection team reviewed UCI's policies and procedures that govern the implementation of its design control and commercial-grade dedication (CGD) programs to verify compliance with the regulatory requirements of Criterion III, "Design Control," and Criterion VII, "Control of Purchased Material, Equipment, and Services," of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities."

   The NRC inspection team reviewed a sample of UCI's completed CGD project documents, including technical evaluations and plans, acceptance criteria, qualification,

test, inspection reports, receipt inspection forms, and associated POs. The NRC inspection team evaluated the criteria for the identification of the safety functions, selection of critical characteristics and acceptance criteria, selection of verification methods, and the justification provided for the sampling methodologies, as applicable, to verify effective implementation of UCI's CGD process. The NRC inspection team reviewed a sample of CGD specifications for four POs, including a circuit breaker, transformer, circuit board, and seals. The NRC inspection team also observed UCI personnel performing receipt inspection and CGD acceptance activities on a sample of ring terminal lugs. The NRC inspection team confirmed that UCI's CGD process provides reasonable assurance that the items and services being dedicated will perform their intended safety function.

The NRC inspection team reviewed UCI's design control process and verified that the procedures delineate activities in a planned, controlled, and orderly manner. The NRC inspection team verified that the procedures provide controls for design inputs, outputs, design analyses, records, and organizational interfaces. The NRC inspection team verified that the provisions in the design process permit the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related function of the product. UCI did not have any design changes for the NRC inspection team to review, however, the NRC inspection team verified that procedures are implemented to control design changes.

The NRC inspection team also reviewed UCI's measures established for the use of the International Laboratory Accreditation Cooperation (ILAC) accreditation process in lieu of performing commercial-grade surveys for procurement of calibration and testing services as part of the CGD process. UCI currently implements this process as described in the Nuclear Energy Institute 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, which was recognized for use by the NRC in a safety evaluation (SE) dated November 23, 2020 (ADAMS Accession No. ML20322A019).

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

b. Observations and Findings

During the review of a sample of receipt inspection records 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," the NRC inspection team noted that that none of the documents certified that the PO requirements were met. One of the conditions from the NRC's SE 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, and (2) that the PO requirements were met. However, the receipt inspection checklist did not document that condition No. 2 from the NRC's SE was being met as this statement was missing from the documentation provided by the laboratory. The NRC inspection team determined this issue to be minor because the laboratories were

accredited to the 2017 edition of ISO/IEC 17025. UCI initiated corrective action report (CAR) No. 20-24 to address this issue.

c. Conclusion

Based on the samples reviewed, except for the minor issue identified above, the NRC inspection team concluded UCI's policies and procedures are consistent with the requirements of Criterion III and Criterion VII of Appendix B to 10 CFR Part 50. No findings of significance were identified.

3. Procurement Document Control and Supplier Oversight

a. Inspection Scope

The NRC inspection team reviewed UCI's policies and implementing procedures that govern the implementation of its procurement document control and supplier oversight programs to verify compliance with the regulatory requirements of Criterion IV, "Procurement Document Control," and Criterion VII of Appendix B to 10 CFR Part 50.

The NRC inspection team reviewed a sample of POs and UCI's Qualified Suppliers List (QSL). For a selected sample of POs for safety-related items, the NRC inspection team verified that the POs included, as appropriate: scope of work, right of access to the suppliers' facilities, and conditions and restrictions imposed to sub-suppliers. The NRC inspection team also confirmed that these POs invoked the applicable technical, regulatory, and quality requirements.

The NRC inspection team selected a sample of suppliers from the QSL to review the methodology for conducting and documenting audits and commercial-grade surveys (CGS) to verify adequate evaluation of the suppliers' controls for meeting the applicable requirements of Appendix B to 10 CFR Part 50. For the sample of supplier audits or CGS, the NRC inspection team verified the following: the audit and CGS reports included an audit/CGS plan; audits/CGS were performed according to established frequency; audit/CGS reports included adequate documented objective evidence of compliance with the applicable requirements; any audit/CGS findings were adequately documented, and CARs were issued for these findings; and audit/CGS documentation was reviewed by UCI's responsible management. The NRC inspection team also verified that audits performed by the Nuclear Industry Assessment Committee were evaluated by UCI in accordance with its written procedures for applicability to its scope of activities. Also, the NRC inspection team performed a walkdown of the receipt inspection and quality control inspection area.

The NRC inspection team also discussed the procurement document control and supplier oversight programs with UCI'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

Based on the samples reviewed, the NRC inspection team concluded UCI's policies and procedures are consistent with the requirements of Criterion IV and Criterion VII of Appendix B to 10 CFR Part 50. No findings of significance were identified

4. Control of Special Processes

a. Inspection Scope

The NRC inspection team reviewed UCI's policies and implementing procedures that govern the implementation of its control of special processes to verify compliance with the regulatory requirements of Criterion IX, "Control of Special Processes," of Appendix B to 10 CFR Part 50.

The NRC inspection team observed brazing of 5/8-inch cooling coils. The NRC inspection team reviewed the following documentation associated with these activities: (1) a sample of work order travelers, and brazing personnel certifications; (2) POs for tubing, brazing material, sockets, (3) test reports for test reports for tubing, brazing material, sockets; and (4) the calibration certificates of the measuring and test equipment (M&TE) used in the brazing activities.

The NRC inspection team also discussed the control of special processes program with UCI'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

Based on the samples reviewed, the NRC inspection team concluded UCI's policies and procedures are consistent with the requirements of Criterion IX of Appendix B to 10 CFR Part 50. No findings of significance were identified.

5. Test Control

a. Inspection Scope

The NRC inspection team reviewed UCI's policies and implementing procedures that govern the implementation of its test control program to verify compliance with the regulatory requirements of Criterion XI, "Test Control," of Appendix B to 10 CFR Part 50.

The NRC inspection team observed the seismic qualification testing of a safety-related time delay relay. The NRC inspection team also reviewed the test documentation associated with a completed functional test of a safety-related relay coil and a completed hydrostatic test of a safety-related hose. The NRC inspection team verified that UCI's test procedures adequately included the applicable technical, quality, and regulatory requirements. The NRC inspection team also confirmed that the following testing elements were satisfied, verified, and recorded, as applicable: (1) test parameters and

initial conditions, (2) test acceptance criteria, (3) test prerequisites, (4) test instrument range, accuracy, and uncertainty appropriate for the test; (5) current calibration; and (6) proper procedure sequence followed, and any deviations documented and evaluated. The NRC inspection team also confirmed that the tests were performed using properly calibrated M&TE. The NRC inspection team also reviewed the training and qualification records of the test technicians identified in the reports and confirmed that testing personnel had completed all the required training and had maintained the applicable qualification and certification in accordance with UCI's policies and procedures.

The NRC inspection team discussed the test control program with UCI'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

Based on the samples reviewed, the NRC inspection team concluded UCI's policies and procedures are consistent with the requirements of Criterion XI of Appendix B to 10 CFR Part 50. No findings of significance were identified

6. Control of Measuring and Test Equipment

a. Inspection Scope

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

For a sample of M&TE, the NRC inspection team verified that the M&TE had the appropriate calibration stickers and current calibration dates, including the calibration due date. The NRC inspection team also verified that the M&TE had been calibrated, adjusted, and maintained at prescribed intervals prior to use. In addition, the NCR inspection team verified that the calibration certificates contained the following information: (1) as-found or as-left conditions; (2) accuracy required; (3) calibration results; (4) calibration dates; and (5) the due date for recalibration. Further, the NRC inspection team also verified that the selected M&TE was calibrated using procedures traceable to known industry standards.

The NRC inspection team verified that UCI's procedures provide guidance for when M&TE equipment is damaged or found to be in an out of tolerance condition during calibration. In such cases, UCI will tag and/or segregate the M&TE, initiate a nonconformance report (NCR), and perform an impact analysis to determine where the M&TE was used and whether the out of tolerance condition had any impact on previous measurements. The NRC inspection team confirmed that UCI has been adequately tagging and/or segregating, initiating NCRs, and performing impact analyses associated with M&TE that is damaged or found to be in an out of tolerance condition in accordance with UCI's procedures.

The NRC inspection team performed a walk-through of UCI's manufacturing areas and observed that M&TE was 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 UCI'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

Based on the samples reviewed, the NRC inspection team concluded UCI's policies and procedures are consistent with the requirements of Criterion XII of Appendix B to 10 CFR Part 50. No findings of significance were identified.

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

a. Inspection Scope

The NRC inspection team reviewed UCI'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 regulatory 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 UCI's processes and procedures provide for the identification, documentation, segregation, evaluation, and disposition of nonconforming items. These processes also apply the principles of rework, repair, reject, use-as-is.

The NRC inspection team observed UCI's laboratory operations and verified that nonconforming materials, parts, or components were properly identified, marked, and segregated, when practical. The NRC inspection team reviewed a sample of NCRs that were associated with the safety-related testing services to confirm that UCI dispositioned the nonconforming materials in accordance with the applicable procedures, documented an appropriate technical justification for various dispositions, and took adequate corrective action regarding the nonconforming items to prevent recurrence, as appropriate.

The NRC inspection team also reviewed a sample of CARs to verify: (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.

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

Corrective Action Associated with Violation 99901436-2014-201-01

Following the February 2014 NRC inspection, the NRC issued Violation 99901436-2014-201-01 for UCI's failure to implement their procedures for performing evaluations of deviations to determine whether such deviations constitute a substantial safety hazard. The NRC identified multiple examples where UCI failed to evaluate a deviation within 60 days of discovery to determine if a substantial safety hazard existed and was reportable.

In its revised response to the NRC dated May 30, 2014, (ADAMS Accession No. ML14163A440) UCI stated that it had opened CAR 13-14 to make changes to Quality Control Procedure (QCP) 21.1, "Reporting of Defects and Noncompliance," QCP 1-5.2, "Nonconformities," QCP 14.1, "Rework, Repair and/or Testing of Customer Supplied Items," and QCP 16.1, "Corrective Actions," and corresponding QA Forms to ensure implementation of a detailed process for conducting 10 CFR Part 21 evaluations.

The NRC inspection team determined that UCI's corrective actions were adequately implemented to address Violation 99901436-2014-201-01. Based on its review, the NRC inspection team closed Violation 99901436-2014-201-01. No findings of significance were identified.

c. Conclusion

Based on the samples reviewed, the NRC inspection team concluded UCI's policies and procedures are consistent with the requirements of Criterion XV and Criterion XVI of Appendix B to 10 CFR Part 50. No findings of significance were identified.

8. Internal Audits

a. Inspection Scope

The NRC inspection team reviewed UCI's policies and implementing procedures that govern the implementation of its internal audits program to verify compliance with the requirements of Criterion XVII, "Audits," of Appendix B to 10 CFR Part 50. The NRC inspection team reviewed a sample of UCI's internal audit reports performed in 2022, 2023, and 2024.

The NRC inspection team verified that UCI's procedure described the scope and purpose of audits to be performed, the frequency, audit criteria, and corrective actions when required. For the sample of internal audits reviewed, the NRC inspection team verified that the audit reports included: (1) an audit plan; (2) the audit results; (3) adequately documented objective evidence with the applicable requirements; and (4) a review by UCI's responsible management. The NRC inspection team verified that the internal audits were performed by qualified auditors who were not auditing their own work and that the internal audits were performed using the appropriate checklists.

The NRC inspection team discussed the internal audits program with UCI'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

Based on the samples reviewed, the NRC inspection team concluded UCI's policies and procedures are consistent with the requirements of Criterion XVIII of Appendix B to 10 CFR Part 50. No findings of significance were identified

9. Safety Conscious Work Environment (SCWE)

a. Inspection Scope

The NRC inspection team reviewed the processes and procedures that implements the UCI's nuclear safety culture. The NRC inspection team selected and interviewed a sample of the technical staff, supervisors, and managers to gain insight on the willingness of UCI staff to raise nuclear safety issues. The NRC inspection team discussed the implementation of the various processes and procedures that support UCI's safety culture with UCI's management and staff. The NRC inspection team determined that the UCI staff are willing to raise nuclear safety concerns. UCI staff also indicated that they felt comfortable raising concerns to their supervisor and management, and elevating issues up through supervision or management if not appropriately addressed. The UCI staff can enter issues directly into the corrective action program or nonconformance program. The attachment to this inspection report lists the individuals and documents reviewed by the NRC inspection team.

b. Observations and Findings

As a result of the NRCs discussions, UCI initiated CAR No. 19-24 to address missed opportunities and SCWE program enhancements. No findings of significance were identified.

c. Conclusion

The NRC inspection team concluded that UCI's safety culture is adequate. No findings of significance were identified

10. Entrance and Exit Meetings

On November 4, 2024, the NRC inspection team discussed the scope of the inspection during the entrance meeting with Mr. Rob Hale, UCI's President and other members of UCI's management and technical staff. On November 8, 2024, the NRC inspection team presented the inspection results during an exit meeting with Ms. Anu Kulkarni and other members of UCI'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 |
|---|---|---|---|---|---|
| Rob Hale | United Controls International (UCI) President | UCI | X | X | |
| Anu Kulkarni | Quality Assurance (QA) Manager | UCI | X | X | X |
| Divya Paidy | Chief Operating Officer | UCI | X | X | X |
| Wesley Hickle | Engineering Manager | UCI | | X | X |
| Felicia Friedli | Director of Material Analysis | UCI | | X | X |
| Kris Hefner | Test Technician | UCI | | | X |
| Mohamadou Niang | Procurement Engineer | UCI | | | X |
| Greg Kors | QA Test Inspector | UCI | | | X |
| Mathew Van Varick | QA Test Inspector | UCI | | | X |
| Eddie Plumley | Laboratory Manager | UCI | | | X |
| Aaron Armstrong | Inspection Team Leader | Nuclear Regulatory Commission (NRC) | X | X | |
| Deanna Zhang | Inspector | NRC | X | X | |
| Yamir Diaz-Castillo | Inspector | NRC | X | X | |
| Rebecca Romero-Devore | Inspector | NRC | X | X | |
| Kerri Kavanagh | Branch Chief | NRC | X* | X* | |

*Remote

2. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED:

| Item Number | Status | Type | Description |
|---|---|---|---|
| 99901436-2014-201-01 | CLOSED | Notice of Violation (NOV) | Part 21.21 |

3. DISCUSSED 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
- IP 71152, “Problem Identification and Resolution,” dated October 31, 2023.

4. DOCUMENTS REVIEWED

Policies and Procedures

- United Controls International Quality Assurance Manual, Revision 21, dated January 26, 2024
- Quality Control Procedure (QCP) No. 2.0, “Training,” Revision 3, dated September 11, 2023
- QCP 2.3, “Auditor and Lead Auditor Qualification and Certification Requirements,” Revision 5, dated September 19, 2019
- QCP 3.0, “Design Control,” Revision 12, dated August 30, 2024
- QCP 3.3, “Deviation,” Revision 12, dated September 11, 2023
- QCP 3.4, “Commercial-Grade Dedication,” Revision 23, dated June 20, 2023
- QCP 3.6, “Sampling,” Revision 8, dated December 22, 2016
- QCP 4.2, “Purchasing,” Revision 25, dated September 11, 2023
- QCP 7.1, “Supplier Qualification Procedure,” Revision 18, dated May 1, 2023
- QCP 8.1, “Receiving and Serialization Procedure,” Revision 29, dated February 16, 2024
- QCP 9.3, “Soldering Procedure,” Revision 1, dated January 22, 2019
- QCP 9.4, “Brazing Procedure,” Revision 1, dated September 1, 2016
- QCP 10.2, “Receiving Inspector Qualification,” Revision 7, dated June 26, 2023
- QCP 10.15, “XRF Analyzer Operation,” Revision 19, dated May 5, 2024
- QCP 10.14, “Material Analyst Qualification,” Revision 14, May 21, 2024
- QCP 10.17, “FT-IR Spectrometer Operation,” Revision 19, dated May 22, 2024
- QCP 10.31, “Procurement Engineering and Technical Specialist Qualification,” Revision 0, dated July 21, 2018
- QCP 11.25, “Measurement and Evaluation of Uncertainty,” Revision 3, dated April 4, 2021
- QCP 11.6, “Equipment Qualification Engineer/Technical Specialist/Technician Qualification Procedure,” Revision 11, dated May 30, 2019
- QCP No. 12.1, “Calibration,” Revision 21, dated April 7, 2021
- QCP No. 16.1, “Corrective Action,” Revision 17, dated April 7, 2021

- QA Form 16A, “Root Cause Analysis.” Revision 0, dated January 30, 2019
- Form 16, “Corrective Action Report (CAR) Form,” Revision 12 (no date provided)
- QCP 15.2, “Control of Nonconforming Items,” Revision 14, dated November 5, 2024
- QCP 18.1, “Internal Audit Procedure,” Revision 17, dated April 27, 2020
- Nuclear Safety Culture Manual, “Nuclear Safety Culture,” Revision 1, dated October 22, 2014

Commercial-Grade Dedication (CGD)

- CGD Test Reports for Job No. 022996-01, “Printed Circuit Board,” dated April 9, 2024
- CGD Specification (CGDS)-003941, “Printed Circuit Board,” Revision 1, dated January 21, 2021
- CGD Test reports for Job No. 022322-01, “Transformer,” dated October 24, 2023
- CGDS-003574, “Transformer,” Revision 3, dated August 29, 2023
- CGDS-004890, “Terminal Lug,” Revision 0, dated May 20, 2024
- Quality Assurance (QA) Form No. 609A, “United Controls International Terms and Conditions for Purchase Orders Requiring Subcontract Testing Services,” Revision 6, dated October 12, 2022
- QA Form No. 12.1, “United Controls International Terms and Conditions for Purchase Orders Requiring Subcontract Calibration Services,” Revision 15, dated October 11, 2022
- QA Form No. 999A, “United Controls International Terms and Conditions for Purchase Orders Requiring Subcontract Certification of Reference Material,” Revision 0 (no date provided)
- CGDS-999, “Commercial-Grade Dedication Specification For Certification Services of Reference Materials,” Revision 0, dated November 23, 2021
- CGDS-004722, “Laboratory Testing Services ISO 17025 Testing Service,” Revision 0, dated September 13, 2023
- CGDS-004723, “Calibration Services ISO 17025 Calibration Service,” Revision 0, dated September 23, 2023
- CGDS-004969, “7012PH Time Delay Relay,” Revision 0, dated October 15, 2024
- QA Form 521, “Maintaining Seismic Qualifications Form,” Revision 2 (no date provided)
- CGDS-002750, “Circuit Breaker,” Revision 01, dated March 21, 2024
- CGD Test Report for Sales Order 020046 “Silicone Rubber Splicing Tape,” dated March 22, 2024
- CGDS-002810, “Lip Seal,” dated November 17, 2024
- CGD Test Report for Sales Order 020046, “O-Ring Cover,” (no date provided)

Certificate of Conformance (CoC)

- UCI CoC for Purchase Order (PO) No. 27679-1468, dated April 9, 2024
- UCI CoC for PO No. 03155714, dated October 24, 2023
- UCI CoC for a relay coil, Sales Order (SO) No. 010060, dated November 13, 2020
- UCI CoC for a hose, Sales Order (SO) No. 024262, dated September 19, 2024

Qualification Reports

- Nuclear Qualification Report (NQR) -10170, “Nuclear Qualification Report (Seismic) for Printed Circuit Board,” Revision 1, dated February 15, 2024

- NQR-8088, “Nuclear Qualification Report (Seismic) for Eaton Molded Case 70 AMP Circuit Breaker,” Revision 0, dated August 17, 2017

Receipt Inspection Forms

- Form 3.4A, “Receipt Inspection for UCI PO 013004,” dated April 5, 2024
- Form 3.4A, “Receipt Inspection for UCI PO 013758,” dated November 5, 2024

Audit/Survey/Supplier Evaluation Report

- Supplier Evaluation Report, dated November 4, 2024
- Supplier Evaluation Report, dated November 17, 2023
- Supplier Evaluation Report, dated August 6, 2024
- Supplier Evaluation Report, dated August 6, 2024
- Supplier Evaluation Report, dated October 3, 2024
- NIAC Audit Report 28037, dated February 2023
- NIAC Audit Report 27082, dated February 4, 2022
- UCI Supplier Audit Report, dated January 4, 2022
- UCI Supplier Audit Report, Revision 1, dated September 5, 2024
- Commercial-grade survey (CGS) report, dated September 4, 2024

Purchase Orders (PO)

- PO No. 27679-1468 for a printed circuit board, Revision 0, dated January 26, 2024
- PO No. 27679-1529 for a seal, Revision 0, dated May 7, 2024
- PO No. 03155714 for a transformer, Revision 2, dated September 1, 2023
- PO No. 011913 for an O-ring, Revision 2, dated December 22, 2022
- PO No. 012034 for sealant, Revision 0, dated February 20, 2023
- PO No. 012320 for a seismic re-analysis report, Revision 0, dated June 1, 2023
- PO No. 013180 for a lead-calcium battery, Revision 0, dated April 8, 2024
- PO No. 013427 for splicing tape, Revision 0, dated June 25, 2024
- PO No. 013426 for splicing tape, Revision 1, dated June 27, 2024
- PO No. 103758 for ring terminal lugs, Revision 0, dated October 30, 2024
- PO No. 013194 for internal auditing services, Revision 0, dated April 16, 2024
- PO No. 012006 for internal auditing services, Revision 0, dated February 7, 2023
- PO No. 010828 for internal auditing services, Revision 0, dated January 24, 2022
- PO No. 011331 for certified reference material, Revision 0, dated June 13, 2022
- PO No. 012731 for certified reference material, Revision 0, dated November 16, 2023
- PO No. 011555 for testing services, Revision 0, dated August 24, 2022
- PO No. 013375 for testing services, Revision 1, dated Augus 20, 2024
- PO No. 012837 for calibration services, Revision 0, dated January 4, 2024
- PO No. 013154 for calibration services, Revision 1, dated April 4, 2024
- PO No. 012836 for calibration services, Revision 0, dated January 3, 2024
- PO No. 012756 for calibration services, Revision 1, dated November 28, 2023
- PO No. 27679-1591 for a time delay relay, Revision 1, dated October 4, 2024
- PO No. 27679-0901 for a relay coil, Revision 1, dated October 23, 2020
- PO No. 45695552 for a hose, Revision 0, dated August 2, 2024
- PO No. 03170348 for cooling coils, Revision 3, dated March 4, 2024

- PO No. 013117 for tubing fabrication for cooling coils, Revision 1, March 20, 2024
- PO No. 013118 for cooling coils material, Revision 0, dated March 20, 2024
- PO No. 013540 for brazing rod material, Revision 0, dated August 7, 2024
- PO No. 27679-1321 for a programmer, Revision 1, dated January 12, 2023
- PO No. 27679-1456 for a seal, Revision 0, dated December 29, 2023
- PO No. 30616 for a seal, Revision 1, dated September 12, 2022

Test Control Documents

- Nuclear Qualification Test Plan No. 0007, "Nuclear Qualification Test Plan (Seismic)," Revision 2, dated April 2017
- QA Form No. 52B, "Seismic Test Form Resonance Search Testing," SO No. 024473, dated November 5, 2024
- QA Form No. 52E, "Seismic Test Form Random Multi-Frequency," SO 024773, dated November 5, 2024
- ASTM Report for PO No. PO-011555, Test Report No. 9530194, Unit ID No. 021842-01-LOT-A001, Sample ID Chevron SRI2, dated September 12, 2022
- Test Report No. 24082104 for PO-013375, Sample MOBILTAC 375 NC 023938-01-LOT-A002, dated September 9, 2024
- Test and Inspection Acceptance Criteria (TIAC) Form for PO No. 011331, Cast Iron Powder, CRM No. 140, dated June 28, 2022
- TIAC Form for PO No. 011331, Steel Pin, No. 130-1, dated June 28, 2022
- TIAC Form for PO No. 12731, 836 Brass Disc 44mm D x19mm, CRM No. 164, dated December 12, 2023
- TIAC Form for PO No. 21644, Grease, Type Chevron SRI #2, 14 Oz Tubes, dated September 19, 2022
- TIAC Form for PO No. 24337, Terminal Lugs, dated November 7, 2024
- Seismic Test Form Resonance Search Testing for Sales Order No. 024473, Test Plan No. NQTP-0007, Revision 2, Control Sample No. 024473-01-LOT-A001CS, dated November 5, 2024
- Seismic Test Form Random Multi-Frequency for Sales Order No. 024473, Test Plan No. NQTP-0007, Revision 2, Control Sample No. 024473-01-LOT-A001CS, dated November 5, 2024
- Functional Test Procedure No. FTP-10060-1, "Relay Coil," Revision 1, dated November 11, 2020
- Material Analysis Test Report No. 24262M-01, Hose, Part No. UCI-104936, Revision 0, dated September 10, 2024
- Material Analysis Test Report No. 24337M-01, Revision 0
- Material Analysis Test Report No. 022166, Brazing Filler Material batch 9101, Revision 0, dated September 15, 2024
- Material Analysis Test Report No. 022166, Brazing Filler Material batch 9135, Revision 0, dated September 15, 2024
- Material Analysis Test Report No. 10.12F-UCI-104410, Revision 0, dated June 27, 2023
- Component Verification Report No. 10.12F-UCI-104773, Revision 0, dated June 27, 2023
- Component Verification Report No. 10.12F-UCI-104774, Revision 0, dated June 27, 2023

Measuring and Test Equipment Documents

- Certificate of Calibration No. 3426909 for a hipot tester AC/DC, asset No. T-754, dated July 11, 2023
- Certificate of Calibration No. 95583B9EACCR20240206 for a vibration controller, asset No. T-1045, dated February 6, 2024
- Certificate of Calibration for an ICP accelerometer, asset No. ST-001, dated April 24, 2024
- Certificate of Calibration for an ICP accelerometer, asset No. ST-002, dated April 24, 2024
- Certificate of Calibration for an ICP accelerometer, asset No. ST-0011, dated April 24, 2024
- Certificate of Calibration No. 013757-2.1 for a hardness tester, asset No. T-145, dated March 26, 2024
- Certificate of Calibration No. 013757-2.2 for a hardness tester, asset No. T-145, dated March 26, 2024
- Certificate of Calibration No. 013757-1.1 for a hardness tester, asset No. T-183, dated March 26, 2024
- Certificate of Calibration No. 013757-1.2 for a hardness tester, asset No. T-183, dated March 26, 2024
- Certificate of Calibration No. 3548891 for a digital multimeter, asset No. T-050, dated January 10, 2024
- Certificate of Calibration No. 3563624 for a torque screwdriver, asset No. T-099, dated February 21, 2024
- Certificate of Calibration No. 3548894 for a digital multimeter, asset No. T-427, dated January 10, 2024
- Certificate of Calibration No. 3548925 for a digital caliper, asset No. T-1047, dated March 21, 2024
- Certificate of Calibration No. 3576341 for a hygrometer, asset No. T-050, dated January 10, 2024
- Certificate of Calibration No. 3394241 for a weight scale, asset No. T-064, dated May 8, 2023
- Certificate of Calibration No. 3701236 for a weight scale, asset No. T-064, dated April 9, 2024
- Certificate of Calibration No. 3576329 for a stopwatch/hygrothermometer, asset No. T-080, dated March 25, 2024
- Certificate of Calibration No. 1888.03 for a high current test set, asset No. 1061, dated May 23, 2024
- Calibration Tool Report (Impact Analysis) for Tool Number T-754, dated September 18, 2023
- Calibration Tool Report (Impact Analysis) for Tool Number T-064, dated May 16, 2023
- Calibration Tool Report (Impact Analysis) for Tool Number T-064, dated April 16, 2024
- Calibration Tool Report (Impact Analysis) for Tool Number T-080, dated June 3, 2024
- Calibration Tool Report (Impact Analysis) for Tool Number T-1061, dated July 10, 2024
- Calibration Tool Report (Impact Analysis) for Tool Number T-1754, dated September 18, 2023
- Calibration Tool Report (Impact Analysis) for Tool Number T-458, dated January 17, 2023
- Calibration Tool Report (Impact Analysis) for Tool Number T-455, dated March 6, 2024

- Calibration Tool Report (Impact Analysis) for Tool Number T-183, dated August 4, 2023
- Calibration Tool Report (Impact Analysis) for Tool Number T-328, dated May 16, 2024
- CRM Certificate No. 502-919-1005.1 for Cast Iron Powder, Part No. 502-919, Lot No. 1005, dated November 4, 2021
- CRM Certificate No. 502-894-0619.0 for a Steel Pin, Part No. 502-894, Lot No. 0619, dated September 25, 2020
- CRM Certificate No. BS-836B for Continuous Cast Leaded Brass Aloy Grade C836, dated May 15, 2020
- Standard Certificate for Standard Reference Material 1921b, Infrared Transmission Wavelength/Wavenumber
- Certificate of Analysis for Ref. No. 319463-2N, Reference Material – 10, dated August 13, 2019
- Certificate of Analysis for BS110B, Certified Reference Material for Grade 110 Electronic Tough Pitch Copper

10 CFR Part 21 Evaluations

- 020002, 021440, 022244, 022492, and 022948

Nonconformance Reports (NCRs)

- 021391, 023052, 023134, 023221, 023494, 023498, 022908, 023673, 22948, 020002, 021440, 022244, 022492, 023439, 023488, 023494, 023583, 023588, 023598, 023635, and 023645

Corrective Action Reports

- 13-14, 01-24, 12-23,12-24, 13-23, 15-24, 16-24, 17-24, and 18-24

Corrective Action Reports Opened During the Inspection

- 19-24, 20-24, 21-24, and 22-24

Training Records

- Annual Training Record for Greg Kors, dated June 26, 2024
- Annual Training Record for Divya Paidy, dated June 26, 2024
- Annual Training Record for Mohamadou Niang, dated June 26, 2024
- Annual Training Record for Eddie Plumley, dated June 26, 2024
- Annual Training Record for Felicia Friedli, dated June 26, 2024
- Annual Training Record for Jairo Zapata dated June 3, 2024
- Annual Training Record for Anthony McClenney, dated June 26, 2024
- Annual Training Record for Belvin McClinton, dated June 26, 2024
- Annual Training Record for Wesley Hickle, dated June 26, 2024
- Annual Training Record for Mathew Van Varick, dated June 26, 2024
- Personnel Qualification Record for Greg Francisco, certification expires on June 30, 2025
- Personnel Qualification Record for Kris Hefner, certification expires on June 30, 2025
- Lead Auditor and Auditor Qualification Records for Norma P. Moreau, Timothy

Kindelberger, and Dennis M. Hadden
- Electrical Test Inspector Qualification Record for Eddie Plumley dated March 19, 2015
- Certification for IPC Specialist for Eddie Plumley, dated June 22, 2023
- Training Record for Equipment Qualification Engineer for Mohamadou Niang, dated May 10, 2018
- UCI Training Matrix

Miscellaneous/Other

- Meeting Minutes for the Objectives Committee Meeting, Revision 0, dated July 30, 2024
- United Controls International Quality Trend Analysis Report 2022
- United Controls International Quality Trend Analysis Report 2023
- Internal Audit Reports for 2022, 2023, and 2024
- Design Specification for Cooling Coil Assembly, SPEC-022166-01, Revision 2, dated July 20, 2024
- Deviation Notice Request No. 023673, dated November 5, 2024