

April 11, 2014

Korina Looft, Quality Manager
United Controls International
205 Scientific Dr.
Norcross, GA. 30092

SUBJECT: NUCLEAR REGULATORY COMMISSION INSPECTION OF UNITED CONTROLS
INTERNATIONAL REPORT NO. 99901436/2014201 AND NOTICE OF
VIOLATION

Dear Ms. Looft:

On February 24, 2014, to February 28, 2014, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection at the United Controls International (UCI) manufacturing facility in Norcross, GA. The purpose of this limited-scope inspection was to assess UCI's compliance with the provisions of selected portions 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."

This inspection specifically evaluated UCI's design control, qualification, and commercial-grade dedication of safety-related items supplied to U.S. operating reactor plants. The enclosed report presents the results of this inspection. This NRC inspection report does not constitute NRC endorsement of your overall quality assurance (QA) or 10 CFR Part 21 programs.

Based on the results of this inspection, the NRC has determined that one Severity Level IV violation of NRC requirements occurred. The NRC evaluated the violation in accordance with the agency's Enforcement Policy, which is available on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>.

The enclosed notice of violation (NOV) cites the violation, and the subject inspection report details the circumstances surrounding it. The NOV cites UCI for failing to perform evaluations of deviations within 60 days of the discovery as necessary to determine whether the identified deviations constitute a substantial safety hazard.

You are required to respond to this letter and to follow the instructions specified in the enclosed NOV when preparing your response. In your response to the enclosed NOV, UCI should document the results of the extent of condition review for this finding and determine if there are any effects on other safety-related components. If you have additional information that you believe the NRC should consider, you may provide it in your response to the NOV. The NRC's review of your response to the NOV also will determine if further enforcement action is necessary to ensure compliance with regulatory requirements.

Please provide a written explanation or statement within 30 days of this letter in accordance with the instructions specified in the enclosed NOV. The NRC will consider extending the response time if you show good cause for doing so.

In accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's Rules of Practice, a copy of this letter, its enclosures, and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system, Agencywide Documents Access and Management System, which is accessible from the NRC Web site 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 so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request that such material is 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 will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21, "Protection of Safeguards Information: Performance Requirements."

Sincerely,

/RA/

Richard A. Rasmussen, Chief
Electrical Vendor Inspection Branch
Division of Construction Inspection
and Operational Programs
Office of New Reactors

Docket No.: 99901436

Enclosures:

1. Notice of Violation
2. Inspection Report: 99901436/2014-201
and Attachment

Please provide a written explanation or statement within 30 days of this letter in accordance with the instructions specified in the enclosed NOV. The NRC will consider extending the response time if you show good cause for doing so.

In accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's Rules of Practice, a copy of this letter, its enclosures, and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system, Agencywide Documents Access and Management System, which is accessible from the NRC Web site 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 so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request that such material is 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 will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21, "Protection of Safeguards Information: Performance Requirements."

Sincerely,

/RA/

Richard A. Rasmussen, Chief
Electrical Vendor Inspection Branch
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and Operational Programs
Office of New Reactors

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DISTRIBUTION:

ASakadales

ERoach

KKavanagh

AMasters

KLooft@unitedcontrols.com

LSanchez@unitedcontrols.com

DPaidy@unitedcontrols.com

ADAMS Accession No.: ML14090A506

*Concurred via email

OFFICE	NRO/DCIP/EVIB	NRO/DCIP/EVIB*	NRO/DCIP/MVIB
NAME	ARamirez	GLipscomb	LMicewski
DATE	4/1/2014	3/26/2014	
OFFICE	R-II/DCP/CPB2*	NRO/DCIP*	NRO/DCIP/EVIB
NAME	CSmith-Standberry	TFrye	RRasmussen
DATE	4/3/2014	3/27/2014	

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NOTICE OF VIOLATION

United Control International
205 Scientific Dr.
Norcross, GA. 30092

Docket No.: 99901436
Report Number: 2014-201

During a U.S. Nuclear Regulatory Commission (NRC) inspection conducted at the United Controls International (UCI) facility in Norcross, GA on February 24, 2014, through February 28, 2014, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

Title 10 of the *Code of Federal Regulations* (10 CFR) 21.21, "Notification of failure to comply or existence of a defect and its evaluation," requires, in part, that "Each corporation, dedicating entity or other entities subject to the regulations in this part shall adopt appropriate procedures to evaluate deviations and failures to comply to identify defects and failures to comply associated with substantial safety hazards as soon as practicable."

Section 6.2 of UCI's Quality Control Procedure (QCP), QCP 21.1, "Reporting of Defects and Noncompliance", Revision 9, dated December 2, 2013, states, in part, that "all employees shall be responsible for reporting any deviations (as defined by this procedure) of nuclear related materials or services in writing to the quality manager...this report shall be made soon as the deviation is detected, and evaluated as soon as practicable, and in all cases within 60 days."

Contrary to the above, as of February 28, 2014, in the following examples UCI failed to implement their procedures for performing evaluations of deviations and for determining whether such deviations constitute a substantial safety hazard.

- On October 23, 2012, a customer returned to UCI a relay that was not operating correctly as per its technical requirements. This relay was part of a batch of relays that had been dedicated by UCI and supplied to customers as a basic component. UCI failed to evaluate within 60 days from the date of discovery whether the issue was specific to the returned relay, whether it constituted a substantial safety hazard, or whether it could be generic to other relays supplied.
- Prior to January 12, 2011, UCI performed seismic qualification tests on equipment with test accelerometers not calibrated for the full test range. UCI staff identified and corrected the deficiency; however, UCI failed to evaluate the deviation for reportability or document an analysis of the effect on seismic tests previously performed on safety-related equipment.
- In July 2013, UCI identified that the laboratory contracted to calibrate their Rockwell Hardness testing machine had not performed a proper calibration of the scale denoted as HRF. UCI failed to evaluate the deviation for reportability or document an analysis of the effect on hardness tests previously performed on safety-related equipment.

This issue has been identified as Violation 99901436-2014-201-01.

This is a Severity Level IV violation (Section 6.9.d of the NRC Enforcement Policy).

Pursuant to the provisions of 10 CFR 2.201, "Notice of Violation," UCI is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-001 with a copy to the Chief, Electrical Vendor Inspection Branch, Division of Construction Inspection and Operational Programs, Office of New Reactors, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, and Washington, DC 20555-0001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System, accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>, to the extent possible, it should not include any personal privacy, proprietary, or Safeguards Information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If Safeguards Information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21, "Protection of Safeguards Information: Performance Requirements."

Dated at Rockville, MD, this 11th Day of April 2014.

**U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NEW REACTORS
DIVISION OF CONSTRUCTION INSPECTION AND OPERATIONAL PROGRAMS
VENDOR INSPECTION REPORT**

Docket No.: 99901436

Report No.: 99901436/2014-201

Vendor: United Controls International
205 Scientific Dr.
Norcross, GA. 30092

Vendor Contact: Korina Looft, Quality Manager
KLooft@unitedcontrols.com

Nuclear Industry Activity: The United Controls International manufacturing facility is located in Norcross, GA. This facility performs commercial grade dedication of safety-related equipment supplied to U.S. nuclear power plants. This inspection is the first at this United Controls International manufacturing facility in Norcross, GA and focused on equipment being supplied to operating reactors.

Inspection Dates: February 24-28, 2014

Inspection Team Leader: George Lipscomb, NRO/DCIP/EVIB

Inspectors:	George Lipscomb	NRO/DCIP/EVIB	Team Leader
	Annie Ramirez	NRO/DICP/EVIB	
	Laura Micewski	NRO/DCIP/MVIB	
	Chelsea Smith-Standberry	R-II/DCP/CPB2	

Approved by: Richard A. Rasmussen, Chief
Electrical Vendor Inspection Branch
Division of Construction Inspection
and Operational Programs
Office of New Reactors

Enclosure

EXECUTIVE SUMMARY

United Controls International
99901436/2014-201

The U.S. Nuclear Regulatory Commission (NRC) conducted this vendor inspection to verify that United Controls International (UCI) 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."

This inspection specifically evaluated UCI's commercial-grade dedication (CGD), procurement, test control and control of measuring and test equipment (M&TE) associated with safety-related equipment supplied to U.S. operating reactor plants, along with the reviewing UCI's nonconformance, corrective actions and 10 CFR Part 21 programs. The inspectors reviewed the implementation of CGD process, equipment qualification, test set up and qualification of electrical and mechanical safety-related components. The inspectors conducted this inspection at UCI's facility in Norcross, GA on February 24 – 28, 2014.

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

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

The Inspection procedures (IP) that were used included IP 43002, "Routine Inspections of Nuclear Vendors," IP 43004, "Inspection of Commercial-Grade Dedication Programs," and IP 36100, "Inspection of 10 CFR Part 21 and Programs for Reporting Defects and Noncompliance."

The information below summarizes the results of this inspection.

10 CFR Part 21

The NRC inspectors determined that UCI is not effectively implementing its 10 CFR Part 21 program consistent with the requirements of 10 CFR Part 21.21. Specifically, the inspectors identified three examples in which UCI failed to perform evaluations of deviations within 60 days of discovery. Based on the information the inspectors issued Violation 99901436-2014-201-01.

Commercial-Grade Dedication

The NRC inspectors concluded that UCI's CGD program was in accordance with the regulatory requirements of Criterion III, "Design Control," Criterion VII "Control of purchased material, equipment, and services", Criterion X, "Inspection," and Criterion XI "Test Control" of Appendix B to 10 CFR Part 50. For the sample of assembly, inspection, testing, and CGD activities evaluated, the NRC inspection team determined that UCI is effectively implementing its CGD program. No findings of significance were identified.

Test Control and Control of Measuring and Test Equipment

The NRC inspectors concluded that UCI has established a program that adequately controls testing, calibration, and use of M&TE in accordance with the regulatory requirements of Criterion XII, "Control of Measuring and Test Equipment," and Criterion XI, "Test Control," of Appendix B to 10 CFR Part 50. For the sample evaluated, the NRC inspection team determined that UCI is effectively implementing its testing and M&TE programs. No findings of significance were identified.

Nonconformance and Corrective Actions

The NRC inspectors determined that the implementation of UCI's programs for control of nonconforming material, parts, or components and corrective action were consistent with the regulatory requirements in Criterion XV, "Nonconforming Materials, Parts, or Components," and Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50. However, the inspectors observed that in the cases listed in the 10 CFR Part 21 section of the report that UCI did not assure that measures were taken to identify and correct conditions adverse to quality. These cases are further explained in the 10 CFR 21 section of the report and are also included in Violation 99901436/2014-201-01.

Internal Audits

The NRC inspectors determined that UCI's has established a program that adequately controls quality assurance activities in accordance with the regulatory requirements of Criterion XVIII, "Audits," of Appendix B to 10 CFR Part 50. For the sample evaluated, the NRC inspection team determined that UCI is effectively implementing its internal audit program. No findings of significance were identified.

REPORT DETAILS

1. 10 CFR Part 21 Program

a. Inspection Scope

The inspectors reviewed United Controls International's (UCI) policies and implementing procedures that govern its Title 10 of the *Code of Federal Regulations* (10 CFR) Part 21 program to verify that the requirements of 10 CFR Part 21 had been effectively implemented for evaluating deviations and failures to comply. The inspectors reviewed UCI's procedures that govern corrective actions, the control and correction of nonconforming items, as well as interviewed quality assurance staff members and engineers, to verify an adequate and direct connection to the 10 CFR Part 21 program, and compliance with regulatory requirements. The documents reviewed by the inspectors are included in the attachment to the inspection report.

b. Observations and Findings

During the review of inspection documentation, the inspectors identified three examples of deficiencies related to the adequacy of UCI's implementation of its 10 CFR Part 21 process and associated procedures. Specifically, the inspectors identified that UCI had not evaluated deviations within 60 days of discovery as required by 10 CFR 21.21.

In the following examples, UCI initiated nonconformance reports (NCRs) for deviations but failed to perform an evaluation of the deviations within 60 days of the discovery date, sufficient to determine whether the deviations constituted a substantial safety hazard.

On October 23, 2012, a customer returned a relay to UCI that was not operating correctly as per its technical requirements. This relay was part of a purchase order for a batch of commercial grade relays that had been dedicated by UCI and supplied to customers as a basic component. The issue with the returned relay had to do with the fact that the relay was required to fail closed upon de-energizing and the relay failed open instead. Once the relay was returned to UCI, UCI initiated a nonconformance report (NCR) to document the issue but failed to perform an evaluation of the issue as necessary to determine whether or not the issue constituted a substantial safety hazard. UCI failed to evaluate whether the issue was potentially generic to the rest of relays that were shipped on the same order. The inspector noted that during dedication testing of this lot of relays at UCI, another relay had failed in a similar way, calling into question the possible generic nature of the failures.

Prior to 2011, UCI performed seismic qualification tests for multiple customers with test equipment not calibrated for the full test range. Test plans approved by the customers stated, in part, that UCI shall subject the specimen to motion over the frequency range of 1 to 100 Hz. However, prior to January 12, 2011, the accelerometers installed on the seismic test equipment were not calibrated to frequencies below 10 Hz. UCI staff identified the deficiency and subsequently contracted with a calibration laboratory to calibrate the accelerometers down to 0.5 Hz. For example, a STATES[®] M-25006 12-point terminal block tested for a nuclear power station in 2004 and a General Electric SBM SJ25105 rotary action switch tested for a nuclear power station in 2006 were tested in a frequency range below that of the calibration of the accelerometers. At the time of the discovery, UCI did not perform an evaluation of the

validity of the test and the impact on the customers when they discovered the accelerometers were not calibrated in the appropriate range. At the prompting of the inspectors, UCI completed an evaluation and concluded that this condition would not have been reportable since calibration records showed that the accelerometers were within tolerance at the first attempt for calibration.

On July 2013, UCI identified that the laboratory contracted to calibrate and verify their Rockwell Hardness testing machine had not performed a proper verification of the scale denoted as HRF. UCI staff initiated an external corrective action request with the laboratory. However, UCI failed to perform an evaluation of the potential impact on the validity of a hardness test performed on items previously supplied. At the prompting of the inspectors, UCI completed an evaluation that concluded that this would not have been reportable since the indirect verification methodology was in compliance with the American Society for Testing & Materials (ASTM).

UCI failed to perform evaluations of deviations within 60 days of discovery of the deviations and report them to the NRC as required by 10 CFR 21.21, for the examples mentioned above. The inspectors identified this issue as Violation 99901436/2014-201-01. UCI has initiated Corrective Action Report (CAR) No.13-14 to address this issue.

c. Conclusions

The inspectors determined that UCI appropriately displayed notices in locations as required by 10 CFR Part 21.6, as well as effectively imposed requirements of 10 CFR 21 in their purchase orders (POs) on qualified suppliers having programs meeting the requirements of Appendix B to 10 CFR Part 50. However, UCI did not implement its 10 CFR Part 21 program consistent with the requirements of 10 CFR Part 21.21. The NRC inspection team issued Violation 99901436/2014-201-01 for UCI's failure to adequately perform 10 CFR Part 21 evaluations as required by 10 CFR 21.21 and UCI procedures. Specifically, the inspectors determined for the examples outlined above, UCI had not performed evaluations of deviations within 60 days of discovery of the defect.

2. Commercial-Grade Dedication

a. Inspection Scope

The inspectors reviewed UCI's policies and procedures governing the implementation of its CGD program, including commercial surveys, procurement control, receipt inspections, and testing, to verify compliance with Criterion III, "Design Control," Criterion VII, "Control of Purchased Material, Equipment and Services," Criterion X, "Inspection," and Criterion XI, "Test Control" of Appendix B to 10 CFR Part 50. In addition, the inspectors verified the implementation of CGD controls through direct observation of inspection activities and review of CGD orders for commercial components and client orders for CGD services.

The NRC inspectors evaluated a sample of CGD activities associated with orders for time delay relays, fuses, resistors, nuclear grade tape, and other safety-related electrical components. The inspectors reviewed a sample of inputs to CGD plans, including: 1) POs, 2) failure mode analysis, 3) development of critical characteristics, and 4) receipt acceptance process. In addition, the inspectors confirmed that the development of critical characteristics and acceptance methods for dedications were acceptable. The

documents reviewed by the inspectors are included in the attachment to the inspection report.

b. Observations and Findings

No findings of significance were identified.

c. Conclusions

The inspectors concluded that UCI's CGD program was in accordance with the applicable Appendix B regulatory requirements. For the sample of assembly, inspection, testing, and CGD activities evaluated, the NRC inspection team determined that UCI is effectively implementing its commercial-grade dedication program. No findings of significance were identified.

3. Test Control and M&TE

a. Inspection Scope

The inspectors reviewed M&TE policies and procedures to determine if UCI's controls were in compliance with the regulatory requirements of Criterion XII, "Control of Measuring and Test Equipment," and Criterion XI, "Test Control" of Appendix B to 10 CFR Part 50. In addition, the inspectors verified the implementation of testing and M&TE control through direct observation of testing activities by UCI personnel and review of associated certificates of calibration.

The NRC inspectors specifically evaluated a sample of M&TE associated with acceptance testing of time delay relays, material testing of safety-related fasteners, and seismic testing of safety-related electrical components. The inspectors confirmed that the instruments were calibrated and appropriate for the range of operation for each described activity. The documents reviewed by the inspectors are included in the attachment to the inspection report.

b. Observation and Findings

No findings of significance were identified.

c. Conclusions

The NRC inspectors concluded that UCI has established a program that adequately controls testing, calibration, and use of M&TE in accordance with the regulatory requirements of Criterion XII, "Control of Measuring and Test Equipment," and Criterion XI, "Test Control" of Appendix B to 10 CFR Part 50. For the sample evaluated, the NRC inspection team determined that UCI is effectively implementing its testing and M&TE programs. No findings of significance were identified.

4. Nonconformance and Corrective Actions

a. Inspection Scope

The inspectors reviewed UCI's policies and procedures governing control of nonconforming components and corrective actions to verify compliance with Criterion XV, "Nonconforming Materials, Parts, or Components," and Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50. The inspectors reviewed UCI documented conditions adverse to quality such as CARs, NCRs, and Deviation Reports (DNRs). In addition, the inspectors conducted several interviews of UCI's management and technical staff about the evaluation of nonconforming components and corrective actions. The inspectors also verified that UCI's nonconformance process provides guidance to evaluate nonconformances for reportability under UCI's 10 CFR Part 21 program. The documents reviewed by the inspectors are included in the attachment to the inspection report.

b. Observations and Findings

During the UCI inspection, the inspectors observed that examples included in the Part 21 section of this report also presented failures in the area of nonconformance and corrective actions. Specifically, UCI failed to assure that conditions adverse to quality, such as deviations, were properly identified and evaluated. As described in the first example of the 10 CFR Part 21 section a relay was returned from a customer. UCI documented the nonconformance but failed to evaluate the deviation to assure that measures were taken to identify and correct conditions adverse to quality. This action could have initiated a Part 21 evaluation for the condition.

With the exception of the failure to evaluate conditions adverse to quality associated with Violation 99901436/2014-201-01, no findings of significance in this area were identified.

c. Conclusions

The inspectors determined that the implementation of UCI's programs for control of nonconforming material, parts, or components and corrective action were consistent with the regulatory requirements in Criterion XV, "Nonconforming Materials, Parts, or Components," and with Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50. However, the inspectors observed that in the cases listed in the 10 CFR Part 21 section of this report, UCI issued NCRs for identified defects but failed to evaluate defects in items already supplied. These cases are further explained in the 10 CFR 21 section of this report and are also included in Violation 99901436/2014-201-01.

5. Internal Audits

a. Inspection Scope

The NRC inspection team reviewed audit policies and procedures to determine if UCI's controls were in compliance with the regulatory requirements of Criterion XVIII, "Audits," of Appendix B to 10 CFR Part 50. In addition, the inspectors discussed the internal audit program with personnel responsible for the planning and implementation of internal

audits and reviewed completed audits and auditor qualifications to verify audit program implementation.

The inspectors reviewed UCI procedure QCP 18.1, "Internal Audit," which describes the internal audit program and gives guidelines for the performance of internal audits.

The inspectors evaluated the multiple partial audits comprising the 2012 UCI internal audit and verified each applicable criterion was reviewed for the year. The inspectors verified that the 2012 audit was successfully completed, and a sample of discrepancies were adequately documented and tracked to closure.

The inspectors also evaluated auditor qualification records associated with the 2012 internal audit's lead auditors. Lead auditor records were evaluated for initial qualification and maintenance of proficiency requirements in accordance with UCI program and regulatory requirements. The documents reviewed by the inspectors are included in the attachment to the inspection report.

b. Observations and Findings

No findings of significance in this area were identified.

c. Conclusions

The inspectors determined that UCI has established a program that adequately controls internal audits in accordance with the regulatory requirements of Criterion XVIII, "Audits," of Appendix B to 10 CFR Part 50. The NRC inspection team determined that UCI is effectively implementing its internal audit program for the sample of audits evaluated. No findings of significance were identified.

6. Entrance and Exit Meetings

On February 24, 2014, the NRC inspection team presented the inspection scope during an entrance meeting with UCI's personnel including Robert Hale, President of UCI. On February 28, 2014, the inspectors presented the inspection results during an exit meeting with Mr. Hale and other UCI personnel.

ATTACHMENT

1. PERSONS CONTACTED AND NRC STAFF INVOLVED:

Name	Title	Affiliation	Entrance	Exit	Interviewed
Divya Paidy	Dedication Program Manager	UCI	X	X	X
Jim Garrison	Engineering Manager	UCI	X	X	X
Korina Looft	Quality Manager	UCI	X	X	X
Felicia Friedli	Material Analysis Manager	UCI	X	X	X
John Hill	Shipping & Receiving	UCI			X
Robe Hale	President	UCI	X	X	
Steve Meelhano	Sales Manager	UCI	X		
Jeannette Martin	Program Manager	UCI	X	X	
Luis Sanchez	Chief Operating Officer	UCI	X	X	X
Kris Hefner	Laboratory Technician	UCI			X
Michael Muriello	Lab Manager	UCI	X	X	X
Sean Ruth	Program Manager	UCI	X	X	X
Mohamadou Niang	Procurement Engineer	UCI			X
Pratyusha Budidha	Material Laboratory Technician	UCI			X
Charles Russell	Laboratory Technician	UCI			X
Maria Vargas	Material Laboratory Technician	UCI			X
Wesley Hickle	Engineer	UCI			X
Jerry Fusilier	Electrical/Mechanical Inspector	UCI			X
Charles Lamondo	Laboratory Technician	UCI			X

2. INSPECTION PROCEDURES USED:

- IP 43002, "Routine Inspections of Nuclear Vendors"
- IP 43004, "Inspection of Commercial-Grade Dedication Programs"
- IP 36100, "Inspection of 10 CFR Part 21 and Programs for Reporting Defects and Noncompliance"

3. ITEMS OPENED, CLOSED, AND DISCUSSED:

Item Number	Status	Type	Description
99901436/2014-201-01	Opened	NOV	10 CFR Part 21

4. DOCUMENTS REVIEWED:

UCI Procedures

- "Quality Assurance Manual," Revision 15, October 31, 2013.
- QCP 3.3, "Deviation," Revision 1, January 31, 2014.
- QCP 3.4, "Commercial Grade Dedication," Revision 15, July 24, 2013.
- QCP 3.6, "Sampling," Revision 6, November 23, 2013.
- QCP 3.8, "Preparation of Engineering Evaluation Report," Revision 4, November 25, 2013.
- QCP 3.9, "Equivalency," Revision 2, dated January 19, 2014.
- QCP 7.1, "Supplier Qualification Procedure," Revision 10, January 21, 2014.
- QCP 8.1, "Receiving and Serialization Procedure," Revision 17, November 20, 2013.
- QCP 8.3, "Identification and Control of Materials, Parts, and Components", Revision 10, August 28, 2013.
- QCP 10.3, "Electrical Test Inspector Qualification," Revision 7, dated October 10, 2011.
- QCP 10.14, "Material Analyst Qualification," Revision 6, dated November 18, 2013.
- QCP 10.15, "XRF Analyzer Operation," Revision 9, dated November 19, 2013.

- QCP 10.16, "Mechanical Inspector Qualification," Revision 1, dated November 22, 2013.
- QCP 10.17 "FT-IR Spectrometer Operation Procedure", Revision 7, dated November 19, 2013.
- QCP 10.22, "Rockwell Hardness Operating Procedure," Revision 6, dated November 19, 2013.
- QCP 11.7, "Seismic Qualification," Revision 4, dated July 11, 2011.
- QCP 11.7, "Seismic Qualification," Revision 5, dated November 27, 2013.
- QCP 12.1, "Calibration," Revision 14, dated January 7, 2014.
- QCP 14.1, "Rework, Repair, and/or Testing of Customer Supplied Items", Revision 4, dated November 23, 2013.
- QCP 15.2, "Control of Nonconforming Items," Revision 7, dated August 29, 2013.
- QCP 16.1, "Corrective Action," Revision 10, dated May 3, 2013.
- QCP 18.1, "Internal Audit," Revision 10, January 3, 2014.
- QCP 18.2, "Supplier Evaluation," Revision 10, December 2, 2013.
- QCP 21.1, "Reporting of Defects and Noncompliance," Revision 8, dated March 26, 2009.
- GL-ST01, "Team-Servo Hydraulic Startup Guideline," Revision 0, dated June 14, 2012.

UCI Nonconformance, Deviation Notice and Corrective Action Reports

- NCR 2522, Materials Test Results did not meet manufacturer and/or standards, January 17, 2011.
- NCR 3195, Serial Number 004571-01-0003 coil smoking, August 24, 2011.
- NCR 3857, S/N 004190-01-0001/004190-01-0002, Excessive Hardware, March 14, 2012.
- NCR 7154, UCI S/Ns 006215-07-0008/006215-07-00009 exceeds current clearing time, February 24, 2014.
- NCR 7084, S/N 006205-01-00006, contacts do not spring back, February 6, 2014.
- NCR 2918, Received Capacitors have date code 1035, June 7, 2011.
- NCR 6980, UCI PO 000229 does not list additional hardware, January 8, 2014.

- NCR 7141, P/N received from Fastenal 72516, should be 1172516, February 24, 2014.
- NCR 2399, Excessive solder, November 9, 2010.
- NCR 2241, Roll of tape shows inconsistency, August 26, 2010.
- NCR 2285, S/N 004078-01-0008 failed contact chattering, September 23, 2010.
- NCR 2035, Inside diameter of flat washers, April 12, 2010.
- NCR 3363, Parts used for pilot cabinet without being dedicated, October 17, 2011.
- NCR 2614, Per ATS report D162379, burst pressure was performed, February 23, 2011.
- NCR 1885, Kit missing one washer, January 6, 2010.
- NCR 1886, Missing lock-washers, nylon straps, and rivets, January 6, 2010.
- NCR 1908, S/N 003341-01-0058 tested open during resistance check, January 26, 2010.
- NCR 2044, Components in PCB S.N 003445-01-0001 should be aligned, April 14, 2010.
- NCR 1913, Received shipment of 101 lugs, January 27, 2010.
- NCR 7149, Receiving lot 006219-001-022414, February 25, 2014.
- NCR 7143, Part Number received per PO-000398, February 24, 2014.
- NCR 2504, During as found test fuse was not removed before measurements, January 6, 2011.
- NCR 3580, In addition to Relay, Hardware not addressed by BOM or CGDS, January 4, 2012.
- NCR 3589, Lub missing in insulation, January 11, 2012.
- NCR 3636, Manufacturer's name on BOM does not match packaging nor received documentation, January 20, 2012.
- NCR 3865, During repairs on S/N 4240-01-0001 per NCR 3852, half of PC1 connector pin 5 socket broke from off from other half, March 15, 2012.
- NCR 3872, Received on item partially out of black plastic casing, March 16, 2012.
- NCR 3862, Interlocking hook on S/N 005002-03-0002 became bent, March 15, 2012.
- NCR 1980, Received P/N IS200TSVOH2BDC packing list and BOM match, March 16, 2010.
- NCR 7033, Item is to be Qty 16 terminal screws and lock washers, January 24, 2014.

- NCR 6827, S/N: 091980-02-00001, during power supply voltage check input power lamp did not light, November 7, 2013.
- NCR 6897, S/N: 091980-02-00001, during power supply voltage check input power lamp did not light, December 5, 2013.
- NCR 6968, S/N: 091980-02-00001, during power supply voltage check input power lamp did not light, January 6, 2014.
- NCR 7064, S/N: 091980-02-00001, during power supply voltage check input power lamp did not light, February 3, 2014.
- NCR 7136, S/N: 091980-02-00001 percentage variance above max tolerance, February 19, 2014.
- NCR 7137, S/N: 091980-02-00001 percentage variance above max tolerance, February 19, 2014.
- NCR 7138, S/N: 091980-02-00001, after power on for test, found unit did not power up properly, February 19, 2014.
- NCR 7027, Plastic bag packing list identify manufacture as Mill-Max as in UCI PO 000317, January 22, 2014.
- NCR 6989, S/N: 001980-17-00001 A2 PCB, January 10, 2014.
- NCR 6841, S/N: 001980-17-00001, base to collector short when trying to apply 107VAC, January 11, 2013.
- NCR 6847, S/N: 001980-17-00001 has charred solder mask material, November 13, 2013.
- NCR 6536, S/N: 001980-045-00001 ASFOUNDED, the output power lamp not working, September 12, 2013.
- NCR 6540, BOM for mk-41 calls for qty of 30 items but received 28 items, September 12, 2013.
- NCR 6916, Customer returned 005687-01-00002 for further evaluation, December 11, 2013.
- NCR 5763, S/N: 005108-10-0002, pick-up time exceeded the maximum, February 28, 2013.
- NCR 5669, Customers states failure on time delay relay P/N: 5108-01, February 6, 2013.
- NCR 5670, Customers states failure on time delay relay P/N: 5108-01, February 6, 2013.
- NCR 1943, S/N: 003568-03-0001 and 003568-03-0002 boards have incorrect transformers installed, February 24, 2010.
- NCR 1800, Transformers will not power with 123-124 V RMS, October 28, 2009.

- NCR 1634, Customer stated board is missing a jumper, July 10, 2009.
- NCR 1636, Customer stated board is missing a jumper, July 10, 2009.
- NCR 3313, Revision 0, Order No. 4510, Line 1, October 4, 2011.
- NCR 3497, Revision 0, Order No. 4597, Line 1, December 9, 2011.
- NCR 3502, Revision 0, Order No. 4510, Line 1, December 13, 2011.
- NCR 3776, Revision 0, Order No. 4570, Line 1, February 23, 2012.
- NCR 4980, Revision 0, Order No. 94597, Line 1, October 23, 2012.
- DNR 7146, Revision 0, Order No. 006210, Line 1, February 24, 2014 (in-process).
- DNR 7151, For CC502, CC503, and CC504, due to equipment limitations unable to perform testing, February 25, 2014.
- DNR 6923, Per CGDS-001740 R01, CC508, December 13, 2013.
- NCR 7149, Revision 0, Order No. 006219, Line 1, February 25, 2014.
- DNR 7151, Revision 0, Order No. 006219, Line 1, February 25, 2014 (in-process).
- NCR 7154, Revision 0, Order No. 006215, Line 7, February 25, 2014 (in-process).
- CAR 11-14, February 18, 2014 (in-process).
- CAR. 15-13, February 20, 2013.
- CAR 06-13, February 8, 2013.
- CAR 01-10, Charger Control Board 93-41-119381, January 28, 2010.
- CAR 05-10, NCR 2118, P/N 41-01-223463, September 23, 2010.
- CAR 06-10, NCR 2150, P/N 90-41-974323, October 5, 2010.
- CAR 05-10, NCR 2118, P/N 41-01-223463, September 23, 2010.
- CAR 10-10, NCR 2397, Order 4125, December 23, 2010.
- CAR 08-11, Antung PO PP100204 Order 4131, February 25, 2011.
- CAR 04-11, PMEC Engineering Procedure Review, February 21, 2011.
- CAR 02-12, QCP 8.1, January 20, 2012.
- CAR 01-12, Failure to review engineering design work, January 20, 2012.

- CAR 15-12, Internal Finding# UCI-2012-01-02, May 8, 2012.
- CAR 24-12, Incorrect Seismic Monitoring, August 12, 2012.
- CAR 02-13, Dedication of components for job 5184, January 28, 2013.
- CAR 21-12, Fuse Procedure, June 2, 1012.
- CARS 06-13, Internal Audit Finding #1 improve CAR process, February 8, 2013.
- CAR 55-13, Inadequate review, October 8, 2013.
- CAR 33-13, UCI SO 5581, Receiving concern, June 24, 2013.
- CAR 18-13, Internal Audit Finding #6, NCR concerns, February 20, 2012.
- CAR 12-13, Time Gap in Re-evaluation of Personnel Qualifications, February 27, 2013.
- CAR 53-13, Dedicated Hardware Not Shipped 5645, October 3, 2013.
- CAR 27-13, Inspection and Test Finding from NIAC Audit, March 18, 2013.
- CAR 15-09, PSEG Printed Circuit Board P/N: 90-41-974313, May 12, 2009.
- CAR 13-14, During NRC inspection there were several observations to improve Part 21 process and procedures, December 10, 2013.
- CAR 28-13, "Commercial Grade NIAC audit finding," revision 1, dated January 2, 2014.
- CAR 2008-16, NIAC Audit "Q.A./Inadequate Procedure Review," dated February 11, 2008.
- CAR 41-13, referencing ATS Report #D201566 (N) and ATS Report # C/D199506-1(N), dated April 29, 2013.
- CPAR 2013-0066, Corrective/Preventive Action Request from Invensys audit of Commercial Grade Dedication, "CGDS is not developed for calibration services," dated April 12, 2013.

Audits and Associated Documents

- Quality Trend Analysis for 2012, March 15, 2013.
- Internal Audit Report for 2012, March 4, 2013.
- Lead Auditor Qualifications for Mike Howell, March 25, 2010.
- Lead Auditor Qualifications for David Jarrow, January 10, 2013.

- Triennial Evaluation and Qualification of ATS as a Qualified Supplier of Test, Calibration, and NDE services for United Controls, dated June 24, 2011.
- Audit Report for audit of supplier Applied Technical Services, Inc., Audit number 14-01/NIAC 19045, dated February 4, 2014.
- Audit Report for audit of supplier Applied Technical Services, Inc., Audit number 11-001/NIAC 16056, dated February 7, 2011.
- Audit Report for audit of supplier Applied Technical Services, Inc., Audit number 08-01/NIAC 13049, dated February 14, 2008.
- Audit Report for audit of supplier PCB Piezotronics, Inc., Audit number NIAC 11528, dated July 27, 2005.

Commercial Grade Dedication Procedures and Documents

- CGDS-208, "Various Fuses," Revision 10, June 14, 2011.
- CGDS-380, "Littlefuse KLDR002 Fuse," Revision 2, September 15, 2011.
- CGDS-001820, "Riedon UT5-55K-5% VCHAR Resistor," Revision 0, January 29, 2014.
- CGDS-001832, "Littlefuse KLDR002 Fuse," Revision 0, February 20, 2014.
- CGDS-001109, "Silicon Rubber Tape", Revision 1, dated 2014.
- CGDS-001734, "End Block", Revision 0, dated 2014.
- CGDS-582, "Phoenix Metals Steel Sheet, Revision 0, dated May 3, 2013.
- CGDS-593, "Commercial Grade Dedication Specification for items procured from Fastenal," Revision 2, dated September 3, 2013.
- CGDS-264, "Commercial Grade Dedication Specification for Type NT and Type ZWM terminal boards procured from States," Revision 0, dated March 16, 2004.
- CGDS-608, "Commercial Grade Dedication Specification for Calibration Services," revision 2, dated February 14, 2014.
- CGDS-020, "Commercial Grade Dedication Specification for type SBM control switch procured from General Electric," revision 8, dated April 18, 2006.
- CGI-1055-4, Rev. 3, Commercial Grade Item Dedication Specification, Cyberex/Thomas & Betts Power Solutions, P/N: 93-41-119381, July 19, 2010.
- Commercial Survey Report, Supplier #1, dated April 15, 2013.

- Commercial Survey Report, Supplier #2, dated June 2, 2010.
- Job # 2014, "CGDS-020, Receiving Inspection Acceptance Criteria," dated July 12, 2006.
- Job # 10QX001382, "CGDS-264, Receiving Inspection Acceptance Criteria," dated March 23, 2004.

Procurement Documents

- P.O. # UCI010213B2, Calibration order with Applied Technical Services, Inc., dated April 23, 2013.
- P.O. # 000169, Calibration order with Applied Technical Services, Inc., dated January 7, 2014.
- P.O. # 000390, Calibration order with PCB Piezotronics, Inc., dated February 10, 2014.
- P.O. # 000430, FUSECO ATL, dated February 20, 2014.
- P.O. # 000199, Silicon Rubber Tape, dated December 3, 2013.
- P.O # 006116, Chicago Miniature Lighting, dated December 4, 2013.
- P.O. # 4500038955, Gas & Electric to United Controls International for seismic qualification for Class 1E safety-related block terminal 12 point slide link, dated March 3, 2004.
- P.O. # NE21927, Duke Energy Corporation to United Controls International for seismic qualification for nuclear safety-related SJ25105 switch, dated March 15, 2006.

Measuring and Test Equipment Documents

- Certificate of Calibration # 1195099 for Asset Number T-043, Digital Handheld Multimeter, dated June 25, 2013.
- Certificate of Calibration # 1125896 for Asset Number T-089, Circuit Breaker Test Set, dated December 20, 2013.
- Calibration Certificate for Asset Number ST-001, ICP Accelerometer Model 353B33 Serial 108689, dated April 6, 2006.
- Calibration Certificate for Asset Number ST-001, ICP Accelerometer Model 353B33 Serial 108689, dated April 16, 2007.
- Calibration Certificate for Asset Number ST-001, ICP Accelerometer Model 353B33 Serial 108689, dated April 24, 2008.

- Calibration Certificate for Asset Number ST-001, ICP Accelerometer Model 353B33 Serial 108689, dated May 21, 2009.
- Calibration Certificate for Asset Number ST-001, ICP Accelerometer Model 353B33 Serial 108689, dated August 2, 2010.
- Calibration Certificate for Asset Number ST-001, ICP Accelerometer Model 353B33 Serial 108689, dated January 12, 2011.
- Calibration Certificate for Asset Number ST-001, ICP Accelerometer Model 353B33 Serial 108689, dated December 14, 2012.
- Calibration Certificate for Asset Number ST-001, ICP Accelerometer Model 353B33 Serial 108689, dated February 14, 2014.
- Calibration Certificate for Asset Number ST-002, ICP Accelerometer Model 353B33 Serial 108690, dated February 14, 2014.
- Certificate of Calibration for Niton XL3t 900S XRF Analyzer S/N 55898, dated January 17, 2014.
- A2LA Certificate Number 1862.01, Accreditation of PCB Piezotronics, Inc. to ISO/IEC 17025:2005 & ANSI/NCSL Z540-1-1994 & ANSI/NCSL Z540.3-2006, dated January 24, 2012.
- A2LA Certificate Number 1862.01, Accreditation of PCB Piezotronics, Inc. to ISO/IEC 17025:2005 & ANSI/NCSL Z540-1-1994, dated July 15, 2010.
- A2LA Certificate Number 1862.01, Accreditation of PCB Piezotronics, Inc. to ISO/IEC 17025:2005 & ANSI/NCSL Z540-1-1994, dated March 24, 2008.
- A2LA Certificate Number 1862.01, Accreditation of PCB Piezotronics, Inc. to ISO/IEC 17025:2005 & ANSI/NCSL Z540-1-1994, dated December 22, 2006.
- A2LA Certificate Number 1862.01, Accreditation of PCB Piezotronics, Inc. to ISO/IEC 17025:1999 & ANSI/NCSL Z540-1-1994, dated December 6, 2004.

Miscellaneous Documents

- NQTP-1382, "Nuclear Qualification Test Plan for States Terminal Block for Rochester Gas & Electric Ginna Station," revision 0, dated March 16, 2004.
- NQTP-2014, "Nuclear Qualification Test Plan for Dedication and Seismic Qualification of a General Electric SBM Switch," revision 1, dated April 18, 2006.
- NQTP-5280, "Nuclear Qualification Test Plan, Appendix A, Seismic Test Procedure for Piece Parts to be Installed in UCI LCP PN: 5280-01," revision 0, dated January 22, 2014.

- NQR-3438, “Nuclear Qualification Report for Littlefuse Time Delay Fuse KLDR2/KLDR002 prepared for Duke Energy Catawba Nuclear Station,” revision 1, dated October 23, 2012.
- EER-14-1808-01, “Engineering Evaluation Report UCI Accelerometer Calibration Range,” revision 0, dated February 27, 2014.
- Personnel qualification record for K. Hefner, Level III Electrical Test Inspector, qualification date July 15, 2013.
- Personnel qualification record for J. Fusilier, Level III Electrical/Mechanical Inspector, qualification date February 20, 2013.
- Personnel qualification record for M. Vargas, Level I Material Laboratory Technician, qualification date May 9, 2013.
- Personnel qualification record for P. Buddha, Level II Material Laboratory Technician, qualification date October 5, 2012.
- Littlefuse Fuse Specification Sheet, “Axial Lead & Cartridge Fuses PICO II >Very Fast – Acting >251/253 Series,” (undated).
- Test and Inspection Acceptance Criteria Form for CGDS-608, receipt inspection of ICP Accelerometer ST-001 Model 353B33, dated February 23, 2014.

RMAs

- RMA 95586, Terminal Screws, P/N: 4-23703-0, September 20, 2013.
- RMA 95576, Terminal Screws, P/N: 4-23703-0, September 19, 2013.
- RMA 994272, Item#: 00020/S/N: 004274-02-0007, May 8, 2013.
- RMA 94891, Item#: P71D12356F05B, December 18, 2013.
- RMA 95336, Electrical Tape, P/N UCI-003XS, November 14, 2013.
- RMA 95443, Job #: 5443, July 3, 2013.
- RMA 9993967, Item#: 41-01-596701, December 18, 2013.
- RMA 95687, Item#: 0001, S/N: 005687-01-00002, November 19, 2013.
- RMA 95108, 001/8 Pin Cycle Timer, February 4, 2013.

6. ACRONYMS USED:

ADAMS	Agencywide Documents Access and Management System
CAR	corrective action report
CGD	commercial grade dedication
CFR	<i>Code of Federal Regulations</i>
DCIP	Division of Construction Inspection and Operational Programs

DNR	Deviation Notice Report
EVIB	Electrical Vendor Inspection Branch
IP	inspection procedure
M&TE	measuring and test equipment
NIAC	Nuclear Industry Assessment Committee
NCR	non-conformance report
NRC	(U.S.) Nuclear Regulatory Commission
NRO	Office of New Reactors
PO	purchase order
QA	quality assurance
QCP	Quality Control Procedure
UCI	United Controls International
U.S.	United States (of America)