

November 10, 2014

Mr. Mike Mennone, VP and General Manager
RSCC Wire & Cable LLC
20 Bradley Park Road
East Granby, CT 06026

SUBJECT: NUCLEAR REGULATORY COMMISSION VENDOR INSPECTION REPORT NO.
901443/2014-202 OF RSCC WIRE & CABLE LLC AND NOTICE OF
NONCONFORMANCE

Dear Mr. Mennone:

On October 6 to October 10, 2014, the U.S. Nuclear Regulatory Commission (NRC) staff conducted an inspection at the RSCC Wire & Cable LLC (RSCC) facility in East Granby, CT. The purpose of the limited-scope inspection was to assess RSCC'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 RSCC's design control, qualification testing, manufacturing, inspections, testing controls, nonconformance, 10 CFR Part 21, and corrective action activities for operating reactor plants. The enclosed report presents the results of the 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 inspection team found that the implementation of your QA program did not meet certain NRC requirements imposed on you by your customers or NRC licensees in the areas of instructions, procedures and drawings and corrective action. Specifically, RSCC failed to ensure that technical changes to safety-related design specifications were provided to customers in accordance with RSCC's Quality Manual. The specific finding and references to the pertinent requirements are identified in the enclosures to this letter.

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

In accordance with 10 CFR 2.390 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's Public Document Room or through the NRC's document system, Agencywide Documents Access and Management System (ADAMS), 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.

Sincerely,

/RA/

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

Docket No.: 99901443

Enclosures:

1. Notice of Nonconformance
2. Inspection Report 99901443/2014-202
and Attachment

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.

Sincerely,

/RA/

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

Docket No.: 99901443

Enclosures:

1. Notice of Nonconformance
2. Inspection Report 99901443/2014-202 and Attachment

DISTRIBUTION:

ASakadales
 ERoach
 KKavanagh
 Mike.Mennone@r-scc.com

ADAMS ACCESSION No.: ML14307B520

*Concurred via email

NRO-002

OFC	NRO/DCIP/ EVIB	NRO/DCIP/ EVIB	NRO/DCIP/EVIB	NRO/DCIP:ES	NRR/DE/EEEE
NAME	EHuang	SSmith	ARamirez	TFrye	SRay
DATE	11/7/14	11/4/14	11/7/14	11/5/14	11/4/14
OFC	RII	KINS/I&CD	KINS/QAD	NRO/DCIP/ EVIB	
NAME	DTerry-Ward	HJang	SYang	RRasmussen (ARamirez for)	
DATE	11/4/14	11/6/14	11/6/14	11/10/14	

OFFICIAL RECORD COPY

NOTICE OF NONCONFORMANCE

RSCC Wire & Cable, LLC.
20 Bradley Park Road
East Granby, CT 06026

Docket No.: 99901443
Inspection Report No.: 99901443/2014-202

Based on the results of a Nuclear Regulatory Commission (NRC) inspection conducted at the RSCC Wire & Cable, LLC (RSCC) facility in East Granby, CT, on October 6–10, 2014, certain activities were not conducted in accordance with NRC requirements which were contractually imposed on RSCC by NRC licensees:

- A. Criterion XVI, “Corrective Action,” of Appendix B to Title 10 of the Code of Federal Regulations (10 CFR) Part 50 states, in part that, “Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected.”

Criterion V, “Instructions, Procedures, and Drawings,” of Appendix B to 10 CFR Part 50 states in part that, “Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings.”

Contrary to the above, as of October 06, 2014, RSCC failed to ensure that technical changes to safety-related design specifications were provided to customers in accordance with RSCC’s Quality Manual. Specifically, product specification drawing TD-005418 for a 1/C 2 American Wire Gauge (AWG) power cable was revised as part of a completed corrective action. A previous review of the calculation basis for the product specification drawing indicated, that the actual cable outside diameter including jacket was incorrect, the minimum bend radius should be higher than what was listed on the product specification drawing, and the maximum pulling tension values were also incorrect which resulted in NRC Notice of Nonconformance 99901443/2014-201-02. This product specification drawing is utilized by customers for installation of cables and determining cable tray fill and for other engineering and design-related activities; however, customers were not made aware of the changed requirements per the requirements of the RSCC Wire & Cable LLC Quality Manual.

This issue has been identified as Nonconformance 99901443/2014-202-01.

Please provide a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Chief, 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 Nonconformance. This reply should be clearly marked as a “Reply to a Notice of

Nonconformance” and should include for each noncompliance: (1) the reason for the noncompliance, or if contested, the basis for disputing the noncompliance; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken to avoid noncompliances; and (4) the date when your corrective action will be completed. Where good cause is shown, consideration will be given to extending the response time.

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

Dated this the 10th day of November 2014.

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

Docket No.: 99901443

Report No.: 99901443/2014-202

Vendor: RSCC Wire & Cable LLC
20 Bradley Park Road
East Granby, CT 06026

Vendor Contact: Mr. Mike Mennone, VP and General Manager
mmennone@r-scc.com

Background: RSCC Wire & Cable, located at 20 Bradley Park Road, East Granby, CT, provides Class 1E cables and commercial-grade dedication services to U.S. nuclear power plants.

Inspection Dates: October 6–10, 2014

Inspection Team Leader: Eugene Huang, NRO/DCIP/EVIB

NRC inspection team: Stacy Smith, NRO/DCIP/EVIB
Annie Ramirez, NRO/DCIP/EVIB
Sheila Ray, NRR/DE/EEEE
Denise Terry-Ward, RII
Sungho Yang, KINS/QAD
Hong-Seok Jang, KINS/I&CD

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

EXECUTIVE SUMMARY

RSCC Wire & Cable, LLC
99901443/2014-202

The U.S. Nuclear Regulatory Commission (NRC) conducted this vendor inspection to verify that RSCC Wire & Cable, LLC (hereafter referred to as RSCC), implemented an adequate (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 RSCC's design, production, and testing of safety-related cables. The NRC inspection team reviewed the procurement, design, equipment qualification, inspection and testing of RSCC's cable manufacturing process. The NRC conducted this inspection at RSCC's facility in East Granby, CT.

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

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

The NRC inspection team used Inspection Procedure (IP) 43003, "Reactive Inspections of Nuclear Vendors," dated October 13, 2013, IP 43002, "Routine Inspections of Nuclear Vendors," dated July 15, 2013, and IP 36100, "Inspection of 10 CFR Part 21 and Programs for Reporting Defects and Noncompliance," dated February 13, 2012.

The information below summarizes the results of this inspection.

10 CFR Part 21

The NRC inspection team determined that the implementation of RSCC's program for 10 CFR Part 21 was consistent with the regulatory requirements of 10 CFR Part 21. No findings of significance were identified.

Qualification/Design Control

The NRC inspection team determined that the implementation of RSCC's program for design and qualification was consistent with the regulatory requirements Criterion III, "Design Control," and Criterion XI, "Test Control," of Appendix B to 10 CFR Part 50. No findings of significance were identified.

Procurement Document Control and Oversight of Contracted Activities

The NRC inspection team determined that the implementation of RSCC's programs for procurement document control and oversight of contracted activities was consistent with the regulatory requirements of Criterion VII, "Control of Purchased Material, Equipment, and Services," of Appendix B to 10 CFR Part 50. No findings of significance were identified.

Manufacturing Process

The NRC inspection team determined that the implementation of RSCC's programs for the assembly, inspection, testing, and commercial-grade dedication activities was consistent with the regulatory requirements of Criterion III, "Design Control," Criterion IV, "Procurement Document 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. No findings of significance were identified.

Inspection and Test Control

The NRC inspection team determined that the implementation of RSCC's programs for testing and inspection was consistent with the regulatory requirements of Criterion X, "Inspections," and Criterion XI, "Test Control," of Appendix B to 10 CFR Part 50. No findings of significance were identified.

Nonconformance Program

The NRC inspection team determined that the implementation of RSCC's program that documents and evaluates nonconformances was consistent with the regulatory requirements of Criterion XV, "Nonconforming Materials, Parts, or Components," of Appendix B to 10 CFR Part 50. No findings of significance were identified.

Corrective Action Program

The NRC inspection team determined that RSCC has not established a program that adequately implements the requirements of Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50. The NRC inspection team issued Nonconformance 99901443/2014-202-01, for RSCC's failure to ensure that technical changes to safety-related design specifications were provided to customers in accordance with RSCC's Quality Manual in addition to the other corrective actions that were taken to address NRC's Notice of Nonconformance 99901443/2014-201-02. Additionally, the NRC inspection team identified unresolved item (URI) 99901442/2014-202-02 pending RSCC's evaluation of other customers that may have been affected by a missed shield discontinuity test.

Quality Assurance Records

The NRC inspection team determined that the implementation of RSCC's program that documents and controls quality assurance records was consistent with the regulatory requirements of Criterion XVII, "Quality Assurance Records," of Appendix B to 10 CFR Part 50. No findings of significance were identified.

REPORT DETAILS

1. 10 CFR Part 21

a. Inspection Scope

The NRC inspection team reviewed RSCC's policies and implementing procedures that govern its Title 10 of the *Code of Federal Regulations* (10 CFR) Part 21 program to verify compliance with the requirements of 10 CFR Part 21, "Reporting of Defects and Noncompliance." Specifically, the NRC inspection team reviewed RSCC's 10 CFR 21 procedure which describes the authorities and responsibilities for evaluating and reporting defects and noncompliance.

The NRC inspection team reviewed Part 21 evaluations associated with previous NRC inspection report (IR) 99901443/2014-201 (ML14259A306). In addition, the team reviewed the evaluation of customer complaints and returns and corrective action request (CAR) reports generated from the previous NRC inspection to ensure deviations were being evaluated appropriately.

The attachment to this inspection report lists the individuals interviewed and documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusions

The NRC inspection team determined that the implementation of RSCC's program for 10 CFR Part 21 was consistent with the regulatory requirements of 10 CFR Part 21. No findings of significance were identified.

2. Qualification and Design Control

a. Inspection Scope

The NRC inspection team reviewed RSCC's policies and procedures for safety-related cable design control and qualification to verify compliance with Criterion III, "Design Control," and Criterion XI, "Test Control," of Appendix B to 10 CFR Part 50. The NRC inspection team evaluated RSCC's design change control process and procedures established in RSCC's Quality Assurance Manual (QAM).

The NRC inspection team evaluated the adequacy of equipment qualification procedures for environmental qualification. Specifically, the NRC inspection team evaluated the autoclave LOCA chamber, technical procedures and instrumentation, and qualification reports to verify consistency with technical requirements and Institute of Electrical and Electronics Engineers (IEEE) standards.

The attachment to this inspection report lists the individuals interviewed and documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusions

The NRC inspection team determined that the implementation of RSCC's program for design and qualification was consistent with the regulatory requirements Criterion III, "Design Control," and Criterion XI, "Test Control," of Appendix B to 10 CFR Part 50. No findings of significance were identified.

3. Procurement Document Control and Oversight of Contracted Activities

a. Inspection Scope

The NRC inspection team reviewed RSCC's policies and implementing procedures that govern the implementation of RSCC oversight of contracted activities to verify compliance with Criterion IV, "Procurement Document Control," and Criterion VII, "Control of Purchased Material, Equipment, and Services," of Appendix B to 10 CFR Part 50. Specifically, the NRC inspection team verified that applicable quality requirements, including technical, regulatory, and reporting requirements, were specified in the procurement documents reviewed and extended to lower-tier suppliers when necessary. Additionally, the NRC inspection team reviewed the procedures and implementation to select and qualify vendors supplying basic components and services, through a sample of certificates of calibrations, audits, surveys, and receiving inspections.

The attachment to this inspection report lists the individuals interviewed and documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusions

The NRC inspection team determined that the implementation of RSCC's programs for governing the supplier approval process to verify compliance was consistent with the requirements of Criterion IV, "Procurement Document Control," and Criterion VII, "Control of Purchased Material, Equipment, and Services," of Appendix B to 10 CFR Part 50. No findings of significance were identified.

4. Manufacturing Process

a. Inspection Scope

The NRC inspection team reviewed RSCC's policies and procedures governing the implementation of its commercial-grade dedication program to verify compliance with Criterion III, "Design Control," Criterion IV, "Procurement Document 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.

The NRC inspection team observed activities related to the manufacture of safety-related cables to ensure personnel were trained, that procedures were available, and that the proper in-process inspections took place. RSCC specification and process engineers were interviewed to verify that manufacturing instructions and procedures were in agreement with activities performed by the operators.

The attachment to this inspection report lists the individuals interviewed and documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusions

The NRC inspection team determined that the implementation of RSCC's programs for the assembly, inspection, testing, and commercial-grade dedication activities was consistent with the regulatory requirements of Criterion III, "Design Control," Criterion IV, "Procurement Document 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. No findings of significance were identified.

5. Inspection and Test Control

a. Inspection Scope

The NRC inspection team reviewed RSCC's policies and implementing procedures in compliance with the regulatory requirements of Criterion X, "Inspection," and Criterion XI, "Test Control," of Appendix B to 10 CFR Part 50. Specifically, the NRC inspection team witnessed and reviewed a final inspection and electrical testing and verified that adequate travelers documents, checklists, and testing procedures were implemented correctly. Specifically, for the electrical tests, the NRC inspection team witnessed conductor resistance, voltage, and insulation resistance tests. The NRC inspection team also verified that persons performing the final inspection and electrical testing were qualified and the inspection results, including deviations, were properly documented. The NRC inspection team verified the instruments used in the electrical tests and final inspection were calibrated. In addition, the NRC inspection team discussed the processes with RSCC's management and technical staff.

The attachment to this inspection report lists the individuals interviewed and documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusions

The NRC inspection team determined that the implementation of RSCC's programs for testing and inspection was consistent with the regulatory requirements of Criterion X, "Inspections," and Criterion XI, "Test Control," of Appendix B to 10 CFR Part 50. No findings of significance were identified.

6. Nonconformances

a. Inspection Scope

The NRC inspection team reviewed policies, implementing procedures, and records that governed the control of nonconforming materials, parts, and components to verify compliance with Criterion XV, "Nonconforming Materials, Parts, or Components," of Appendix B to 10 CFR Part 50. The NRC inspection team reviewed the RSCC Wire & Cable LLC Quality Manual, which contain RSCC overall quality policies, to ensure it addressed the regulatory requirements for nonconforming items.

The NRC inspection team observed final QC inspection of cables to ensure RSCC requirements were being implemented. The NRC inspection team verified that RSCC's procedures address the requirement that nonconforming material, parts, or components shall be identified and segregated if appropriate, and verified the implementation of this requirement through walkdown of the shop area.

The attachment to this inspection report lists the individuals interviewed and documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusions

The NRC inspection team determined that the implementation of RSCC's program that documents and evaluates nonconformances was consistent with the regulatory requirements of Criterion XV, "Nonconforming Materials, Parts, of Components," of Appendix B to 10 CFR Part 50. No findings of significance were identified.

7. Corrective Actions

a. Inspection Scope

The NRC inspection team reviewed policies, implementing procedures, and records that govern corrective actions to verify compliance with Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50. Specifically the NRC inspection team reviewed standard procedure 071SP008, "Corrective Action," Revision 10, dated November 4, 2014, to ensure that it implemented the regulatory requirements. The NRC inspection team reviewed other processes at RSCC that could identify a condition adverse to quality, such as customer complaints, to see how they interfaced with the corrective action process. In addition, the NRC inspection team reviewed corrective actions associated with previous NRC IR 99901443/2014-201.

The attachment to this inspection report lists the individuals interviewed and documents reviewed by the NRC inspection team.

b. Observations and Findings

The NRC inspection team reviewed CAR No. 14-080 which was created to address issues identified in Nonconformance 99901443/2014-201-02. Product specification drawing TD-005418, revision 3 and Technical Data Sheet # E-2412, revision 1 were determined to still have discrepancies upon discussing with the RSCC staff. The new specification drawing and data sheet listed a maximum pulling tension, basket in pounds of 59 lbs compared to the original value of 529 lbs. However, upon NRC review, it was determined that 59 lbs was also incorrect and RSCC consequently issued revision 4 to product specification drawing TD-005418 to update the value to 531 lbs. A previous review of the calculation basis for the product specification drawing indicated, that the actual cable outside diameter including jacket was incorrect, the minimum bend radius should be higher than what was listed on the product specification drawing, and the maximum pulling tension values were also incorrect.

Per RSCC's Quality Manual, section 7.2.2 "Review of Requirements Related to the product" RSCC should have notified applicable customers of the specification changes as part of their corrective actions. However, RSCC corrected the specification drawing and did not notify the applicable customers. This product specification drawing is utilized by customers for installation of cables and determining cable tray fill and for other engineering and design-related activities. RSCC failed to ensure that technical changes to safety-related design specifications were provided to customers in accordance with their Quality Manual in addition to the other corrective actions that were taken to address NON 99901443/2014-201-02.

This issue has been identified as Nonconformance 99901443/2014-202-01.

Additionally, the NRC inspection team reviewed CAR 14-074, dated March 21, 2014. The CAR documented that Korea Hydro and Nuclear Power Co., Ltd. (KHNP) required a shield discontinuity test per the ICEA S-73-532 standard in their procurement specification. RSCC did not perform this test before shipping it to KHNP. KHNP subsequently rejected the shipment upon receipt inspection. RSCC, as part of their

corrective actions, updated their applicable work instructions to perform the shield discontinuity test if required by the customer. However, RSCC did not evaluate to see if there were any other customers that may have also required this test which was also missed by RSCC. The NRC inspection team will need to review RSCC's evaluation to determine if a nonconformance has occurred. This issue is categorized as an Unresolved Item (URI).

This issue has been identified as URI 99901442/2014-202-02.

c. Conclusions

The NRC inspection team determined that RSCC has not established a program that adequately implements the requirements of Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50. The NRC inspection team issued Nonconformance 99901443/2014-202-01, for RSCC's failure to ensure that technical changes to safety-related design specifications were provided to customers in accordance with RSCC's Quality Manual in addition to the other corrective actions that were taken to address NRC's Notice of Nonconformance 99901443/2014-201-02. Additionally, the NRC inspection team identified unresolved item (URI) 99901442/2014-202-02 pending RSCC's evaluation of other customers that may have been affected by a missed shield discontinuity test.

8. Quality Assurance Records

a. Inspection Scope

The NRC inspection team reviewed policies, implementing procedures, and records that govern quality assurance records to verify compliance with Criterion XVII, "Quality Assurance Records," of Appendix B to 10 CFR Part 50. The NRC inspection team reviewed the RSCC Wire & Cable LLC Quality Manual, which contain RSCC overall quality policies, to ensure it addressed the regulatory requirements for quality assurance records.

The attachment to this inspection report lists the individuals interviewed and documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusions

The NRC inspection team determined that the implementation of RSCC's program that documents and controls quality assurance records was consistent with the regulatory requirements of Criterion XVII, "Quality Assurance Records," of Appendix B to 10 CFR Part 50. No findings of significance were identified.

9. Entrance and Exit Meetings

On October 6, 2014, the NRC inspection team presented the inspection scope during an entrance meeting with Mr. Mike Mennone, VP & General Manager of the Utility Division, and other RSCC personnel. On October 10, 2014, the NRC inspection team presented the inspection results during an exit meeting with Mr. Mike Mennone, VP & General Manager of the Utility Division, and other RSCC personnel.

ATTACHMENT

1. PERSONS CONTACTED AND NRC STAFF INVOLVED

Name	Title	Affiliation	Entrance	Exit	Interviewed
M. Mennone	VP/GM Utility	RSCC	X	X	
D. Murphy	Director of QA	RSCC	X	X	X
E. Rasmussen	Director of Engineering	RSCC		X	X
R. Jendza	Quality Manager – Utility	RSCC			X
J. Mastalerz	QA Manager	RSCC			X
L. Suarez	Technician	RSCC			X
J. Taylor	QC Lead Auditor	RSCC			X
C. Connell	Quality Lab Supervisor	RSCC			X
C. Lissabet	Laboratory Technician	RSCC			X
A. Espvik	Process Engineer	RSCC			X
E. Huang	Inspection Team Leader	NRC	X	X	
A. Ramirez	Inspection Team Member	NRC	X	X	
S. Smith	Inspection Team Member	NRC	X	X	
D. Terry-Ward	Inspection Team Member	NRC	X	X	
S. Ray	Inspection Team Member	NRC	X	X	
S. Yang	Inspection Team Member	KINS	X	X	
H. Jang	Inspection Team Member	KINS	X	X	
E. Roach	Branch Chief	NRC	X		
R. Rasmussen	Branch Chief	NRC		X	

2. INSPECTION PROCEDURES USED:

IP 43003, “Reactive Inspections of Nuclear Vendors”

IP 43002, “Routine Inspections of Nuclear Vendors”

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

3. ITEMS OPENED, CLOSED, AND DISCUSSED:

<u>Item Number</u>	<u>Status</u>	<u>Type</u>	<u>Description</u>
99901443/2014-201-01	CLOSED	NON	Criterion III
99901443/2014-201-02	CLOSED	NON	Criterion III
99901443/2014-202-01	OPEN	NON	Criterion XVI and Criterion IV
99901443/2014-202-02	OPEN	URI	

4. DOCUMENTS REVIEWED:

Procedures

- 010SP003, "Document Control," Revision 9
- 010SP004, "10 CFR 21 Procedure," Revision 5, dated September 18, 2014
- 010SP004, "10 CFR 21 Procedure," Revision 4, dated March 10, 2014
- 041DI101, "Control of Designs," Revision 1
- 041DI105, "Design Reviews and Release," Revision 1
- 041DI111, "Engineering Drawings and Calculations," Revision 1
- 044SP001, "Rockbestos-Surprenant Customer Product Designs (RCPD's)," Revision 3
- 044SP002, "MIT Control," Revision 6
- 051DI108/1, "Jacket Extrusion," Revision 0
- 051DI136, "Cable Cross Check," Revision 0
- 053DI101, "Preventative Maintenance," Revision 7
- 053SP001, "Work Order System," Revision 6
- 071SP004, "Records Procedure," Revision 8
- 071SP008, "Corrective Action," Revision 10, dated November 4, 2013
- 071SP008, "Corrective Action," Revision 10
- 071SP013, "Preventive Action," Revision 4
- 072DI101, "In-Process Inspection Procedure," Revision 4
- 072DI105, "Electrical Test Department Manual of Procedures," Revision 11

072DI114, "Insulation & Jacket Wall thickness," Revision 0

072SP005, "Off-Standard Procedure," Revision 5

072SP009, "Workmanship Standard, Firewall III Jackets," Revision 1

061SP004, "Returns and Complaints," Revision 14, dated April 13, 2006

071SP008, "Corrective Action," Revision 10, dated November 4, 2013

072SO004, "Procedure for Control of Inspection, Measurement, and Test Equipment," Revision 7, dated September 19, 2014

041DI109, "Qualification Test Procedure Manual for Class 1E Qualification Tests," Revision 11, dated May 19, 2008

051DI106/1, "Irradiation Instructions," Revision 1, dated March 7, 1997

051DI103-8, "Irradiation Quality Checklist," Revision 2

Beam Parameters KXL-760G Solid Constructions R01, dated September 18, 2004

Purchase Orders

NU-02SR749396, from "RSCC to South Carolina Electric & Gas Company (VC Summer)," dated January 17, 2013

SP-1512, "VC Summer Procurement Specification for Rockbestos Firezone 3HR Cable," Revision 0," dated July 12, 2012

PO 154985, from "RSCC to Trinity Specialty Compounding, for irradiated KXL-760G," dated May 8, 2014

PO 4500170065, from "Nebraska Public Power District to RSCC," dated April 14, 2014

PO #654934-WBF-14-0003, "TVA, Cable, Insulated, QA-1, power, #1/0 AWG, copper, 3 stranded, FRXLPE, 600, 90 DEG C, 19 FRXLPE, 1E-LOCA, SS-E12.8.01...." dated March 4, 2014

PO #154996, "RALCO, Safety Related Calibration Services," dated May 08, 2014

PO #00720016, "Duke Energy Corporation, "#2 AWG, 1/C unshielded, 600V, Tin copper, 7 strand, XLPE insulation, black power cable, Firewall III, part P623973", safety related," dated February 19, 2014 (RSCC no. 104632)

PO #10399114, "Entergy, "Cable, electrical power, Tinned cu, 1/C, #2 AWG, 600V, Firewall III-J, 7 strand, XLPE insulation, black hypalon jacket and cable code 102", safety related," dated November 18, 2013 (RSCC no. 103752)

PO #00743330, "Duke Energy Corporation, "Cable, power, #2 AWG, 1/C, unshielded, 600V, Tin copper, 7 strand, black XLPE insulation, CSPE jacket, Firewall III-J", safety related," dated July 18, 2014 (RSCC no. 106323)

PO #02286672, "Point Beach Nuclear Plant, "Cable, Firewall III-J, 1/C #2 AWG, 7 strand, copper, XLPE/CSPE cable, 90° C, 600V", safety related," dated December 23, 2013 (RSCC no. 104116)

PO #441611, "Calvert Cliffs Nuclear Power Plant, "Cable, power, 600V, 1/C #2 AWG, flame retardant, XLPE insulation, /CSPE jacket, either cable code B32B, Rockbestos type P62-3973", safety related," dated October 18, 2013 (RSCC no. 103366)

Test procedures, Reports, Plans

9-171-E241D, "Technical Specification for Class 1E Power, Control, and Instrumentation Cables," Revision 1, dated December 20, 2013

EGS-TR-HC1365-02, "Test Report for DBE/HELB Qualification of Firezone 3HR Insulated Wire/Cable Manufactured by RSCC Wire and Cable, LLC," dated December 28, 2012

RSCC-2003, "Storage and Installation Manual for RSCC Wire and Cable," Revision 1, dated March 30, 2012

Equipment Qualification Test Reports

QR-5805, "Report on Qualification of Tests for Firewall III Irradiation Cross-Linked Polyethylene Constructions for Class 1E Service in Nuclear Generating Stations," Revision 2, dated May 22, 1986

QR-1302, "Report on Qualification of Firezone 3HR Thermoset Silicone Rubber Insulation with Thermoset Low Smoke Zero Halogen Jacket for Generic Nuclear Incident Class 1E Service in Nuclear Generating Power Stations for 40 Years of Qualified Lie at 90C," Revision 0, dated January 7, 2013

QR-5804, "Report on qualification test for Rockbestos Firewall III Chemically cross-linked Polyethylene for Class 1E Service in Nuclear Generating Power Stations," dated October 24, 1984

QR-1309, "Environmental Qualification Report for Shin-Kori #3&4 to Specification 9-171-E241D for Class 1E Power, Control, and Instrumentation for 60 years," Revision 2, dated April 2, 2014.

Corrective Action Reports

CAR No.14-010, dated Feb 11, 2014

CAR No.14-013, dated Feb 28, 2014

CAR No. 14-072, dated May 20, 2014

CAR No. 14-073, dated May 20, 2014
CAR No. 14-074, dated May 21, 2014
CAR No. 14-076, dated May 21, 2014
CAR No. 14-077, dated May 21, 2014
CAR No. 14-080, dated May 22, 2014
CAR No. 14-082, regarding Part 21 procedure inadequacies, dated May 22, 2014
CAR No. 14-095, dated June 06, 2014
CAR No. 14-110, regarding NPPD material return, dated July 18, 2014
Claim No. 2149, dated October 30, 2013
Claim No. 1930, dated December 16, 2011
Claim No. 1969, dated May 14, 2012
Claim No. 2052, dated February 19, 2013
CAR No. 14-072, dated May 20, 2014
CAR No. 14-141, dated October 09, 2014
CAR No. 14-142, dated October 09, 2014

Miscellaneous

Purchase Order 149357, "Dimethylpolysiloxane," dated August 14, 2012 shipped from Path Silicones to RSCC (Sold to Hubbard Hall shipped to Rockbestos)
Certificate of Analysis for PO 149357, dated August 15, 2012
Approved Supplier Listing, dated August 7, 2014
Commercial Grade Item Survey Checklist for Trinity Specialty Inc., dated October 13, 2011
Customer Claim Number 2242, for a missing conductor, dated August 11, 2014
Certificate of Conformance for V. C. Summer, dated July 30, 2013
Claim No. 2206, for jacket defect, dated May 15 2014
E-2412, Technical Data Sheet specification, 1/C 2 AWG 7/.0974" Tinned Copper, .045

"FR-XLPE, .030" Black CSPE 600V, Revision 1, dated January 18, 2012

E-2412, Technical Data Sheet specification, 1/C 2 AWG 7/.0974" Tinned Copper, .045

"FR-XLPE, .030" Black CSPE 600V, Revision 1, dated May 21, 2014

E-2412, Technical Data Sheet specification, 1/C 2 AWG 7/.0974" Tinned Copper, .045

"FR-XLPE, .030" Black CSPE 600V, Revision 1, dated October, 09, 2014

TD-004545 titled "Class 1E Nuclear safety related power cable - 600V 90°C 2/C 10 AWG"
Revision 0

TD-005154 titled "1/C #16 AWG 26/S TC Firewall SR control Cable, 600V, 125°C" Revision 1

TD-005554 titled "Class 1E Nuclear safety related 1 Pair 18 AWG Type TX Thermocouple
Cable for Detroit Edison", Revision 0

TD-005418 titled "Class 1E Nuclear safety related 90°C 600V 1/C 2AWG power cables,"
Revision 2

TD-005418 titled "Class 1E Nuclear safety related 90°C 600V 1/C 2AWG power cables,"
Revision 3

TD-005418 titled "Class 1E Nuclear safety related 90°C 600V 1/C 2AWG power cables,"
Revision 4

Rockbestos Products, Technical Bulletin #28, "Bending Radii & Installation Practices," Revision
5

RSCC training guide, Rules for Pulling Tension & Bend Radii, training date August 28, 2014

RSCC Daily In-Process Inspection Reports for machines 801 EXT., 835 (JM C), 837 (JM D) 800
and FLX 1, for September 2014

RSCC Daily In-Process Inspection Reports for machines 801 EXT., 835 (JM C), 837 (JM D) 800
and FLX 1, for October 2014

Labor Reporting Test ticket, order number 008818, for conductor resistance, voltage and
insulation resistance tests, dated 9/10/14

Labor Reporting Test ticket, order number 987652, for conductor resistance, voltage and
insulation resistance tests, dated 7/29/14

Labor Reporting Test ticket, order number 997999, for conductor resistance, voltage and
insulation resistance tests, dated 9/30/14

Labor Reporting Test ticket, order number 587026, for conductor resistance, voltage and
insulation resistance tests, dated 7/22/14

Labor Reporting Test ticket, order number 051751, for conductor resistance, voltage and insulation resistance tests, dated 9/28/14

RSCC customer order status list for product number FT01002-000, 1C 2 AWG 7/.0974 tinned copper cable, Rockbestos-Surprenant sales spec: RSS-3-021, report start: September, 10, 2002 end: July, 18, 2014

RSCC cable process/routing sheet, identification FT01002-000, 1C 2 AWG, 7/.0974 TC XLPE, report name RTG310, report date October 07, 2014

RSCC cable process/routing sheet, identification EX04004-000, 4C 4 AWG, 105/24 TC EXANE, Revision 13

RSCC cable process/routing sheet, identification FN04016-052, 4C 16 AWG, 7/.0192 TC XLPE Firewall, Revision 3

5. ACRONYMS USED:

ADAMS	Agencywide Documents Access and Management System
AWG	American Wire Gauge
C	conductor
CAR	corrective action request
CFR	Code of Federal Regulations
CGD	commercial grade dedication
CV	continuous vulcanization
EQ	equipment qualification
IEEE	Institute of Electrical and Electronics Engineers, Inc.
IP	inspection procedure
IR	inspection report
LOCA	loss of coolant accident
NON	Notice of Nonconformance
NOV	Notice of Violation
NRC	Nuclear Regulatory Commission
PO	purchase order
QA	quality assurance
RSCC	Rockbestos Suprenant Cable Corporation