

May 16, 2014

Mr. Russell E. Stone, Quality Manager
Specialty Maintenance and Construction, Inc.
A Division of Metaltek International
4015 Drane Field Rd.
Lakeland, FL 33811

SUBJECT: NUCLEAR REGULATORY COMMISSION INSPECTION REPORT
NO. 99901439/2014-201 AND NOTICE OF NONCONFORMANCE

Dear Mr. Stone:

On April 7-11, 2014, the U.S. Nuclear Regulatory Commission (NRC) staff conducted an inspection at the Specialty Maintenance and Construction, Inc. (SMCI) facility in Lakeland, FL. The purpose of this limited-scope routine inspection was to assess SMCI'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 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 SMCI's implementation of quality activities associated with the fabrication and inspection of the remain-in-place steel formwork modules for concrete and in-containment refueling water storage tank wall sub-modules for the Westinghouse Electric Company AP1000 reactor design. The enclosed report presents the results of the inspection. This NRC inspection report does not constitute an NRC endorsement of SMCI's overall quality assurance (QA) program. During this inspection, the NRC inspection team looked at fabrication and inspection activities associated with inspections, tests, analyses, and acceptance criteria (ITAAC) from Revision 19 of the approved certified AP1000 design control document. Specifically, these activities were associated with the future closure of ITAAC 3.3.00.02a.i.a. The NRC inspection team did not identify any findings associated with the ITAAC contained in Section (4) of the attachment to this report.

During this inspection, the NRC inspection team found that the implementation of SMCI's QA program failed to meet certain NRC requirements imposed on you by your customers. Specifically, the NRC inspection team determined that SMCI was not fully implementing its QA program in the areas of control of special processes and nonconforming materials, parts, or components. The specific findings and references to the pertinent requirements are identified in the enclosures to this letter. In response to the enclosed notice of nonconformance (NON), SMCI should document the results of the extent of condition review for these findings and determine if there are any effects on other safety-related components.

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

In accordance with 10 CFR 2.390, "Agency Rules of Practice and Procedure," a copy of this letter, its enclosure(s), 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), accessible at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response, (if applicable), 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/

Edward H. Roach, Chief
Mechanical Vendor Inspection Branch
Division of Construction Inspection
and Operational Programs
Office of New Reactors

Docket No.: 99901439

Enclosures:

1. Notice of Nonconformance
2. Inspection Report No. 99901439/2014-201
and Attachment

R. Stone

- 2 -

In accordance with 10 CFR 2.390, "Agency Rules of Practice and Procedure," a copy of this letter, its enclosure(s), 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), accessible at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response, (if applicable), 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/

Edward H. Roach, Chief
 Mechanical Vendor Inspection Branch
 Division of Construction Inspection
 and Operational Programs
 Office of New Reactors

Docket No.: 99901439

Enclosures:

1. Notice of Nonconformance
2. Inspection Report No. 99901439/2014-201
and Attachment

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NRO-002

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NAME	YDiaz-Castillo	JOrtega-Luciano	BClarke	RPatel	RDavis
DATE	5/5/2014	5/5/2014	5/5/2014	5/5/2014	5/5/2014
OFFICE	NRO/DE/SEB1	NRO/DE/SEB1	RII/DCI/CIB2	NRO/DCIP	NRO/DCIP/MVIB
NAME	PPatel	MVera	SSmith	TFrye	ERoach
DATE	5/5/2014	5/5/2014	5/2/2014	5/6/2014	5/16/2014

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NOTICE OF NONCONFORMANCE

Specialty Maintenance and Construction, Inc
4015 Drane Field Road
Lakeland, FL 33811
Docket No. 99901439

Based on the results of a U.S. Nuclear Regulatory Commission (NRC) inspection conducted at the Specialty Maintenance and Construction, Inc. (SMCI) facility in Lakeland, FL, on April 7, 2014, through April 11, 2014, certain activities were not conducted in accordance with NRC requirements which were contractually imposed on SMCI by its customers or NRC licensees:

- A. Criterion IX, "Control of Special Processes," of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," states, in part, that "Measures shall be established to assure that special processes, including welding, heat treating, and nondestructive testing, are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements."

Westinghouse Electric Company (WEC) Document Number APP-VW20-ZO-023, "Welding Specification for ASTM A240 UNS S32101 Duplex Stainless Steel," Revision 3, dated February 11, 2011, includes additional welding procedure qualification testing requirements to those welding procedure testing requirements listed in the American Welding Society (AWS) D1.6, "Structural Welding Code-Stainless Steel," 1999 Edition. WEC specification APP-VW20-ZO-023 states, in part, that "In addition to the tensile and bend tests required by AWS D1.6, each qualification weldment shall be tested in accordance with ASTM E562 for verifying that the weldment contains 35-65% ferrite."

Contrary to the above, as of April 11, 2014, SMCI failed to qualify a welding procedure in accordance with WEC specification APP-VW20-ZO-023. Specifically, SMCI welding procedure qualification record (PQR) 1015-Partial Joint Penetration (PJP), lists the results of the ferrite testing of the test weld root as 73 percent, which is outside of the 35-65 percent ferrite range acceptance criteria specified by WEC in APP-VW20-ZO-023. PQR 1015-PJP is a supporting PQR for welding procedure specification (WPS) number 1015. WPS 1015 is being used to perform welding on the in-containment refueling water storage tank modules for the AP1000 reactor design.

This issue has been identified as Nonconformance 99901439/2014-201-01.

- B. Criterion XV, "Nonconforming Materials, Parts, or Components," of Appendix B to 10 CFR Part 50, states, in part, "Measures shall be established to control materials, parts, or components which do not conform to requirements in order to prevent their inadvertent use or installation. These measures shall include, as appropriate, procedures for identification, documentation, segregation, disposition, and notification to affected organizations. Nonconforming items shall be reviewed and accepted, rejected, repaired or reworked in accordance with documented procedures."

SMCI procedure QP-15.0, "Nonconformances," states that "This procedure describes the methods and responsibilities for initiating and processing Nonconformance Reports (NCR), to ensure that conditions are promptly identified, classified, fully evaluated, dispositioned, tracked, and corrected in a timely manner commensurate with their safety significance and complexity."

Step 5.9.1.B of Section 5.9, "Evaluating Test Results Obtained from M&TE Found to be Outside of Calibration Tolerances," of SMCI Quality Procedure 12.0, "Control of Measuring and Test Equipment," Revision 2, dated October 19, 2012, states, in part, that "For M&TE found to be outside of calibration tolerances, the Corporate Quality Manager or designee shall Initiate an NCR in accordance with procedure QP-15.0, Nonconformances."

Contrary to the above, as of April 11, 2014, SMCI failed to adequately identify, document, evaluate, segregate, disposition, and notify affected organizations of nonconforming products. Specifically, in 10 out of the 21 nonconformance reports reviewed by the NRC inspection team, SMCI failed to provide objective evidence of the following: (1) proper identification and description of the cause of the nonconforming product or activity, (2) indication of whether the nonconformance was evaluated for 10 CFR Part 21 reportability, (3) disposition and justification of the acceptability of the nonconforming product or activity, and (4) indication that the disposition was adequately completed to close the nonconformance report. In addition, SMCI failed to initiate and disposition nonconformance reports for six different pieces of measuring and testing equipment that were received out of calibration by the calibration vendor.

This issue has been identified as Nonconformance 99901439/2014-201-02.

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, Mechanical Vendor Inspection Branch, Division of Construction 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 from the NRC's document system (Agencywide Documents Access 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 this 16th day of May 2014.

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

Docket No.: 99901439

Report No.: 99901439/2014-201

Vendor: Specialty Maintenance and Construction, Inc.
A Division of Metaltek International
4015 Drane Field Rd.
Lakeland, FL 33811

Vendor Contact: Mr. Russell Stone
Quality Assurance Manager
E-mail: Russel.Stone@metaltek.com
Phone: 863-644-8432

Nuclear Industry Activity: Specialty Maintenance and Construction, Inc. is under contract to Chicago Bridge & Iron to fabricate, assemble, inspect, transport, and deliver the remain-in-place steel form work modules for concrete and in-containment refueling water storage tank wall sub-modules for the Westinghouse Electric Company AP1000 reactor design.

Inspection Dates: April 7-11, 2014

Inspectors: Yamir Diaz-Castillo NRO/DCIP/MVIB Team Leader
Jonathan Ortega-Luciano NRO/DCIP/MVIB
Brent Clarke NRO/DCIP/MVIB
Raju Patel NRO/DCIP/MVIB
Robert Davis NRO/DE/MCB
Pravin Patel NRO/DE/SEB1
Marieliz Vera NRO/DE/SEB1
Steven Smith RII/DCI/CIB2

Approved by: Edward H. Roach, Chief
Mechanical Vendor Inspection Branch
Division of Construction Inspection
and Operational Programs
Office of New Reactors

EXECUTIVE SUMMARY

Specialty Maintenance and Construction, Inc.
99901439/2014-201

The U.S. Nuclear Regulatory Commission (NRC) staff conducted a vendor inspection at the Specialty Maintenance and Construction, Inc. (SMCI) facility to verify that 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." In addition, the NRC inspection also verified that SMCI implemented a program under 10 CFR Part 21, "Reporting of Defects and Noncompliance," that met the NRC's regulatory requirements. The NRC inspection team conducted the inspection from April 7-11, 2014. This was the initial NRC inspection at the SMCI facility.

This technically focused inspection specifically evaluated SMCI's implementation of quality activities associated with the fabrication and inspection of the remain-in-place steel form work modules for concrete and in-containment refueling water storage tank wall sub-modules for the Westinghouse Electric Company (WEC) AP1000 reactor design. These modules and sub-modules are being fabricated for the Vogtle Electric Generating Plant (VEGP), Units 3 and 4 and Virgil C. Summer Generating Station, Units 2 and 3.

Some of the specific activities observed by the NRC inspection team included:

- Corrective Action Report review board meeting
- receipt inspection of ASTM A240 S32101 duplex plates for the CA03 module
- water-jet cutting of duplex stainless steel plates at the Rubinger's facility (Rubinger is a sub-supplier of water-jet cutting services for SMCI)
- visual, penetrant and ultrasonic testing for complete joint penetration weld joint No. 109A and 109B on CA03 module 10-T02 for VEGP Unit 3
- fit-up and visual inspection of weld joints 24A, 24B, 30A, and 30B for CA03 module 08-MA for VEGP Unit 3
- semi-automatic flux cored arc welding (FCAW) on the CA03 module 10, T02 T-section Flange, weld number 109, for VEGP Unit 3

In addition to observing these activities, the NRC inspection team verified that measuring and test equipment was properly identified, marked, calibrated, and used within its calibrated range.

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

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

During the course of this inspection, the NRC inspection team implemented Inspection Procedure (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”; IP 36100.01, “Inspection of 10 CFR 50.55(e) Programs for Reporting Defects and Noncompliance During Construction”; IP 65001.01, “Inspection of ITAAC-Related Foundations and Buildings”; IP 65001.A, “Inspection of the As-Built Attributes for Structures, Systems, and Components Associated with ITAAC”; and IP 65001.F, “Inspection of the ITAAC-Related Design and Fabrication Requirements.”

The information below summarizes the results of this inspection.

Manufacturing Control

The NRC inspection team issued Nonconformance 99901439/2014-201-01 in association with SMCI’s failure to implement the regulatory requirements of Criterion IX, “Control of Special Processes,” of Appendix B to 10 CFR Part 50. Nonconformance 99901439/2014-201-01 cites SMCI for failing to qualify a welding procedure in accordance with WEC specification APP-VW20-ZO-023, “Welding Specification for ASTM A240 UNS S32101 Duplex Stainless Steel,” Revision 3, dated February 11, 2011. Specifically, SMCI welding procedure qualification record (PQR) 1015-Partial Joint Penetration (PJP), lists the results of the ferrite testing of the test weld root as 73 percent, which is outside of the 35-65 percent ferrite range acceptance criteria specified by WEC in APP-VW20-ZO-023. PQR 1015-PJP is a supporting PQR for welding procedure specification (WPS) number 1015. WPS 1015 is being used to perform welding on the in-containment refueling water storage tank modules for the AP1000 reactor design.

Nonconforming Material, Parts, or Components

The NRC inspection team issued Nonconformance 99901439/2014-201-02 in association with SMCI’s failure to implement the regulatory requirements of Criterion XV, “Nonconforming Materials, Parts, or Components,” of Appendix B to 10 CFR Part 50. Nonconformance 99901432/2013-201-02 cites SMCI for failing to adequately identify, document, evaluate, segregate, disposition, and notify affected organizations of nonconforming products. Specifically, in 10 out of the 21 nonconformance reports reviewed by the NRC inspection team, SMCI failed to provide objective evidence of the following: (1) proper identification and description of the cause of the nonconforming product or activity, (2) indication of whether the nonconformance was evaluated for 10 CFR Part 21 reportability, (3) disposition and justification of the acceptability of the nonconforming product or activity, and (4) indication that the disposition was adequately completed to close the nonconformance report. In addition, SMCI failed to initiate and disposition nonconformance reports for six different pieces of measuring and testing equipment that were received out of calibration by the calibration vendor.

Other Inspection Areas

The NRC inspection team determined that SMCI is implementing its programs for 10 CFR Part 21, training and qualification of personnel, design control, commercial-grade dedication, oversight of contracted activities, internal audits, material traceability, inspection, control of measuring and test equipment, and corrective actions in accordance with the applicable regulatory requirements of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed and activities observed, the NRC inspection team also determined that SMCI is implementing its policies and procedures associated with these programs. No findings of significance were identified.

REPORT DETAILS

1. Manufacturing Control

a. Inspection Scope

The U.S. Nuclear Regulatory Commission (NRC) inspection team reviewed the Specialty Maintenance and Construction, Inc.'s (SMCI's) policies and implementing procedures that govern the control of special processes to verify compliance with the regulatory requirements of the following:

- Criterion IX, "Control of Special Processes," 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"
- American Welding Society (AWS) D1.1 Structural Welding Code - Steel, 2000 Edition, and D1.6 Structural Welding Code – Stainless Steel, 1999 Edition, and the American Society for Nondestructive Testing (ASNT) SNT-TC-1A, "Personnel Qualification and Certification in Nondestructive Testing," 1996 Edition

The NRC inspection team reviewed a sample of welding and nondestructive examination (NDE) documents associated with the fabrication and testing of the CB modules (i.e., remain-in-place steel formwork modules for concrete) and CA03 [in-containment refueling water storage tank (IRWST) wall] modules for the Westinghouse Electric Company (WEC) AP1000 reactor design. The NRC inspection team verified that the applicable welding data; such as weld material identification number, welding procedure specification (WPS), inspection procedures used, and the final inspection results were recorded on weld travelers.

The NRC inspection team reviewed a sample of certified material test reports (CMTR) for base materials and welding materials used to fabricate the modules and verified that those materials met all of the applicable American Society for Testing and Material (ASTM), AWS, and design requirements.

The NRC inspection team witnessed the Visual Examination Test, Penetrant Examination Test, and Ultrasonic Test of weld number 109 on CA03 module 10, T02 T-section Flange. The NRC inspection team verified that the examinations were performed by qualified personnel using qualified procedures in accordance with the requirements of AWS D1.6 and ASNT SNT-TC-1A.

The NRC inspection team evaluated SMCI's weld filler wire control boxes and reviewed records associated with the storage, issuance and return of weld filler wires. The NRC inspection team verified that SMCI's storage and control of weld filler material was in accordance with SMCI Procedure QP-9.0 "Weld Filler Metal and Consumables Control," Revision 3, dated September 10, 2013.

The NRC inspection team discussed the special processes program with SMCI's management and technical staff. The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observations and Findings

During the review of WPS 1015 supporting procedure qualification record (PQR) -1015-Partial Joint Penetration (PJP), Revision 0, dated November 11, 2013, the NRC inspection team noted that supporting PQR-1015-PJP did not meet the requirements of WEC Document Number APP-VW20-ZO-023, "Welding Specification for ASTM A240 UNS S32101 Duplex Stainless Steel," Revision 3, dated February 11, 2011. Specifically, PQR 1015-PJP listed the results of the ferrite testing of the test weld root as 73 percent, which is outside of the 35-65 percent range specified by APP-VW20-ZO-023. The NRC inspection team identified this issue as an example of Nonconformance 99901439/2014-201-01 related to SMCI's failure to qualify welding procedures in accordance with WEC Document No. APP-VW20-ZO-023. An improper balance of ferrite and austenite in duplex stainless steels can impact corrosion resistance. The NRC inspection team noted that the above issue was the result of SMCI's failure to list the appropriate acceptance criteria in PQR 1015-PJP. PQR 1015-PJP lists the acceptance criteria for the root and face of the weld as 5 percent ferrite minimum in lieu of the 35-65 percent range specified by WEC for duplex stainless steel to duplex stainless steel welds. The incorrect acceptance criteria for the root and face ferrite content was also listed in SMCI PQR 1015. However, the actual test values for PQR 1015 were within 35-65 percent as specified by WEC. SMCI initiated nonconformance report (NCR) No. FLA-2014-067 and corrective action report (CAR) No. 2014-116 to address this issue. Subsequent to the issuance of the above NCR and CAR, SMCI identified, prior to their presentation to the NRC inspection team for review, that WPS 1019 supporting PQRs 1019 and 1019-PJP both contained similar issues with the incorrect acceptance criteria of 5 percent minimum ferrite for the root and face of the weld. In both supporting PQRs the results of the ferrite testing of the test weld root were outside of the 35-65 percent as specified by WEC.

c. Conclusion

The NRC inspection team issued Nonconformance 99901439/2014-201-0X in association with SMCI's failure to implement the regulatory requirements of Criterion IX, "Control of Special Processes," of Appendix B to 10 CFR Part 50. Nonconformance 99901439/2014-201-01 cites SMCI for failing to qualify a welding procedure in accordance with WEC specification APP-VW20-ZO-023, "Welding Specification for ASTM A240 UNS S32101 Duplex Stainless Steel," Revision 3, dated February 11, 2011. Specifically, SMCI welding procedure qualification record (PQR) 1015-PJP, listed the results of the ferrite testing of the test weld root as 73 percent, which is outside of the 35-65 percent ferrite range specified by WEC in APP-VW20-ZO-023. PQR 1015-PJP is a supporting PQR for WPS number 1015. WPS 1015 is being used to perform welding on the in-containment refueling water storage tank modules for the AP1000 reactor design.

2. Nonconforming Materials, Parts, or Components

a. Inspection Scope

The NRC inspection team reviewed SMCI's policies and implementing procedures that govern the control of nonconformances to verify compliance with the requirements of Criterion XV, "Nonconforming Materials, Parts, or Components," of Appendix B to 10 CFR Part 50. The NRC inspection team discussed the nonconformances program

with SMCI's management and technical staff. The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observations and Findings

During the review of a sample of NCRs, the NRC inspection team noted that several NCRs did not adequately identify, document, evaluate, segregate, disposition, and notify affected organizations of nonconforming products. Step 5.1.1 of QP-15.0 "Nonconformances," Revision 1, dated October 19, 2012, states, in part, that "Any individual within the SMCI facility may initiate a nonconformance report using Form NCR-001, "Nonconformance Report." The initiator shall place a red tag on the item and notify the Quality Assurance Department." In addition, QP-15.0 describes the responsibilities of the QA Manager. Among those responsibilities the QA Manager is responsible for: (1) evaluating and logging the nonconformances into the SMCI's Nonconformance system, (2) reviewing NCRs to evaluate the recommended disposition (s) and their effectiveness, (3) determining if the nonconformance needs to be handled in accordance with QP-16.0, "Corrective Action" and QP-16.1, "10 CFR Part 21 Reportable Conditions," and (4) verifying that the NCRs adequately document the completion of the disposition and corrective action before signing the "close out" section of the form.

In 10 out of the 21 NCRs reviewed by the NRC inspection team, SMCI failed to provide objective evidence that showed the actual status of the nonconforming item. For example, the NCRs did not provide objective evidence of the following: (1) proper identification and description of the cause of the nonconforming product or activity, (2) indication of whether the nonconformance was evaluated for 10 CFR 21 reportability, (3) disposition and justification of the acceptability of the nonconforming product or activity, and (4) indication that the disposition was adequately completed to close the nonconformance report.

For the NCRs that were identified as "open" or waiting to be "re-worked" by SMCI, the NRC inspection team walked down SMCI's assembly floor to verify that the nonconforming materials for these NCRs were properly identified, marked, and segregated, when practical. The NRC inspection team also requested the quality control (QC) inspectors to locate these nonconforming parts on the assembly floor. The QC inspectors were not able to locate the nonconforming parts on the assembly floor nor were able to identify what parts were nonconforming because the NCR did not have enough detail to identify the parts that were nonconforming. After interviewing SMCI management and technical staff, the NRC inspection team was informed that all the nonconforming parts documented in these NCRs were "re-worked," evaluated, and successfully dispositioned. The NRC inspection team determined that the NCRs did not provide the actual status of these parts or any objective evidence to demonstrate that the "re-work" was completed and the nonconforming parts were returned to the assembly floor. SMCI verbally confirmed that the parts documented in the NCRs reviewed by the NRC inspection team were inspected by QC and found to be in conformance with the applicable requirements. The NRC inspection team identified this issue as an example of Nonconformance 99901439/2014-201-02 for SMCI's failure to adequately identify, document, evaluate, segregate, disposition, and notify affected organizations of nonconforming products. SMCI initiated CAR Nos. 109 and 110 to address this issue.

During review of a sample of Certificates of Calibration for measuring and test equipment (M&TE), the NRC inspection team identified six certificates where the vendor providing calibration services identified that the M&TE was either received out of calibration or improperly functioning. The equipment found to be out of calibration were a thermometer (SMC-21209), 2 calipers (06001068 and 1107124), a micrometer (032-30), and two pressure gauges (173302 and 69302). Step 5.9.1.B of Section 5.9, "Evaluating Test Results Obtained from M&TE Found to be Outside of Calibration Tolerances," of SMCI Quality Procedure 12.0, "Control of Measuring and Test Equipment," Revision 2, dated October 19, 2012, states, in part, that "For M&TE found to be outside of calibration tolerances, the Corporate Quality Manager or designee shall Initiate an NCR in accordance with procedure QP-15.0, Nonconformances." During discussions with SMCI's staff, the NRC inspection team learned that SMCI failed to generate NCRs to evaluate if previous inspection results were affected in accordance with QP-15.0. The NRC inspection team identified this issue as another example of Nonconformance 99901439/2014-201-02 for SMCI's failure to adequately identify, document, evaluate, segregate, disposition, and notify affected organizations of nonconforming products. SMCI initiated CAR No. 104 to address this issue.

c. Conclusion

The NRC inspection team issued Nonconformance 99901439/2014-201-02 in association with SMCI's failure to implement the regulatory requirements of Criterion XV, "Nonconforming Materials, Parts, or Components," of Appendix B to 10 CFR Part 50. Nonconformance 99901432/2013-201-02 cites SMCI for failing to adequately identify, document, evaluate, segregate, disposition, and notify affected organizations of nonconforming products. Specifically, in 10 out of the 21 nonconformance reports reviewed by the NRC inspection team, SMCI failed to provide objective evidence. In addition, SMCI failed to initiate and disposition nonconformance reports for measuring and testing equipment that were received out of calibration by the calibration vendor.

3. 10 CFR Part 21 Program

a. Inspection Scope

The NRC inspection team reviewed the policies and implementing procedures of SMCI that govern the facility's compliance with the requirements of 10 CFR Part 21, "Reporting of Defects and Noncompliance." In addition, the NRC inspection team evaluated the 10 CFR Part 21 postings and a sample of SMCI's purchase orders (PO) for compliance with the requirements of 10 CFR 21.21, "Notification of Failure to Comply or Existence of a Defect and its Evaluation," and 10 CFR 21.31, "Procurement Documents." The NRC inspection team also verified that SMCI's nonconformance and corrective action procedures provide a link to the 10 CFR Part 21 program. Furthermore, the NRC inspection team discussed the 10 CFR Part 21 program with SMCI's management and technical staff. At the time of the inspection, SMCI had not performed any evaluations under 10 CFR Part 21. The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team determined that SMCI is implementing its 10 CFR Part 21 program in accordance with the regulatory requirements of 10 CFR Part 21. Based on the limited sample of documents reviewed, the NRC inspection team also determined that SMCI is implementing its policies and procedures associated with the 10 CFR Part 21 program. No findings of significance were identified.

4. Design Control

a. Inspection Scope

The NRC inspection team reviewed SMCI's policies and implementing procedures that govern the design control and commercial-grade dedication programs to verify their compliance with the regulatory requirements of Criterion III, "Design Control," in Appendix B to 10 CFR Part 50. The NRC inspection team reviewed SMCI's process for preparing fabrication drawings as described in SMCI's Quality Procedure (QP) 3.2, "Engineering Change Notice", Revision 0, dated October 19, 2012. For a sample of SMCI drawings, the NRC inspection team verified that the WEC and Chicago Bridge & Iron (CB&I) design specifications, including technical and quality requirements, were adequately translated into SMCI's design documents.

The NRC inspection team also reviewed the process for implementing design changes initiated by WEC, CB&I and SMCI, which are handled through an Engineering & Design Coordination Report (E&DCR). When design changes appeared to be required, SMCI forwards WEC and CB&I a Request for Information with details of the proposed design changes. Once WEC and CB&I approve the design changes, an E&DCR is sent back to SMCI. The NRC inspection team confirmed that SMCI is using the latest approved design drawings for fabrication, that the appropriate quality standards were specified and included in design documents, that sufficient coordination between WEC, CB&I, and SMCI was taking place for the design and fabrication of the module, and that design changes were being effectively controlled and approved.

The NRC inspection team also reviewed QP-7.3, "Commercial Grade Dedication," Revision 4, dated August 17, 2013, which provides the methodology for dedicating commercial-grade items and services for use in safety-related applications, including the development of critical characteristics, dedication methods and the acceptance criteria. At the time of the inspection, SMCI was not performing any commercial-grade dedication of commercial items. The NRC inspection team reviewed the dedication of calibration services to verify how SMCI developed its commercial-grade dedication plan for third-party calibration services.

The NRC inspection team discussed the design control and commercial-grade dedication programs with SMCI's management and technical staff. The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

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

5. Corrective Action

a. Inspection Scope

The NRC inspection team reviewed SMCI's policies and implementing procedures that govern the corrective action program to verify compliance with the requirements of Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50.

The NRC inspection team reviewed a sample of the CARs associated with the fabrication of safety-related AP1000 sub-modules to verify the adequacy of SMCI's implementation and control of its corrective action program (CAP). The NRC inspection team also evaluated the adequacy of SMCI's implementation of corrective actions for findings identified by CB&I source inspectors as conditions adverse to quality, documented by CB&I in Notices of Unsatisfactory Conditions. In addition, the NRC inspection team verified that SMCI's corrective action process provides a connection to the 10 CFR Part 21 program.

The NRC inspection team observed a CAR review board meeting to determine if SMCI's staff demonstrated sufficient knowledge of the CAP and whether the meeting provided an adequate review of the CARs, including proposed categorization (significant condition adverse to quality, condition adverse to quality, or other as applicable) and appropriate screening for 10 CFR Part 21 applicability.

The NRC inspection team discussed the CAP with SMCI's management and technical staff. The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observations and Findings

At the time of the inspection, the NRC inspection team noted that SMCI had performed an evaluation of their CAP and identified several deficiencies in the implementation of SMCI's CAP. The NRC inspection team verified the CARs generated to address the issues identified and the proposed corrective actions.

No findings of significance were identified.

c. Conclusion

The NRC inspection team determined that SMCI is implementing its CAP in accordance with the regulatory requirements of Criterion XVI of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team also

determined that SMCI is implementing its policies and procedures associated with the CAP. No findings of significance were identified.

6. Material Traceability

a. Inspection Scope

The NRC inspection team reviewed SMCI's policies and implementing procedures that govern material traceability to verify compliance with the regulatory requirements of Criterion VIII, "Identification and Control of Material, Parts, and Components," of Appendix B to 10 CFR Part 50.

The NRC inspection team observed that all materials were marked with unique identifiers traceable to procurement records. For a sample of the IRWST modules, the NRC inspection team observed that identification markings were: (1) traceable to design and shop drawings, (2) carried and remained legible through the manufacturing process, and that (3) applied using materials and methods that provided a clear and legible identification and did not adversely affect the function or service life of the modules.

The NRC inspection team discussed the material traceability program with SMCI's management and technical staff. The attachment to this inspection report lists the 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 SMCI is implementing its material traceability program in accordance with the regulatory requirements of Criterion VIII of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team also determined that SMCI is implementing its policies and procedures associated with the material traceability program. No findings of significance were identified.

7. Inspection

a. Inspection Scope

The NRC inspection team reviewed SMCI's policies and implementing procedures that govern the inspection program to verify compliance with the regulatory requirements of Criterion X, "Inspection," of Appendix B to 10 CFR Part 50.

The NRC inspection team verified that SMCI's procedures for inspection activities provided measures for the generation of inspection documents, such as travelers, instructions, checklists, or other appropriate means. For a sample of inspection documents, the NRC inspection team verified that these documents included the appropriate information as required by SMCI procedures such as the inspection date, type of observation, results of examination and tests, and the initials of the QC inspector,

mandatory hold points were indicated and that work did not proceed without appropriate approval.

The NRC inspection team observed in-process non-destructive visual, penetrant and ultrasonic testing inspection on a complete joint penetration weld joint Nos. 109A and 109B on the IRWST CA03 module 10 T02. The NRC inspection team also verified that inspections were performed by qualified persons other than those who performed or directly supervised the work being inspected. In addition, the NRC inspection team verified that inspection tools used were calibrated and within the applicable inspection range; confirmed that detailed design reference materials were adequately used and observed the process for identifying and documenting any nonconformance identified during in-process inspection activities.

The NRC inspection team observed QC inspections on the shop floor that included traceability checks, in-process and final inspections to verify that SMCI was performing inspections in accordance with policies and procedures and applicable codes and standards. The NRC inspection team verified that inspection results were documented by the QC inspector and reviewed by authorized personnel qualified to evaluate the technical adequacy of the inspection results.

The NRC inspection team verified that SMCI had a process in place to initiate a nonconformance report when a counterfeit, fraudulent, and suspect item (CFSI) was suspected. The NRC inspection team interviewed three QC inspectors to assess their understanding of controlling and documenting when a CFSI is suspected. The NRC inspection team noted that the QC inspectors were knowledgeable on the use of documents to verify, document and report CFSI.

The NRC inspection team evaluated SMCI's receipt inspection area to determine if SMCI had adequate material control. The NRC inspection team observed that accepted materials were adequately identified and rejected materials were segregated in a nonconformance hold area and were properly marked with red hold tags.

The NRC inspection team discussed the inspection program with SMCI's management and technical staff. The attachment to this inspection report lists the 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 SMCI is implementing its inspection program in accordance with the regulatory requirements of Criterion X of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team also determined that SMCI is implementing its policies and procedures associated with the inspection program. No findings of significance were identified.

8. Control of Measuring and Test Equipment

a. Inspection Scope

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

For a sample of M&TE, the NRC inspection team determined 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 calibration records reviewed by the NRC inspection team indicated the as-found or as-left conditions, accuracy required, calibration results, calibration dates, and the due date for recalibration. The NRC inspection team also verified that the selected M&TE was calibrated using procedures traceable to known industry standards.

The NRC inspection team performed a walk down to ensure that equipment located in the M&TE storage area, M&TE hold area and fabrication shop were labeled, handled, and stored in a manner that indicated the calibration status of the instrument and ensured its traceability to calibration test data.

The NRC inspection team discussed the M&TE program with SMCI's management and technical staff. The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observations and Findings

Please refer to Section 2.b above for a detailed description of Nonconformance 99901439/2014-201-02 associated with SMCI's failure to adequately implement its M&TE program related to the opening of NCRs associated with M&TE received out of calibration by the calibration vendor.

c. Conclusion

Except for the issue identified in Nonconformance 99901439/2014-201-02, the NRC inspection team determined that SMCI is implementing its M&TE program in accordance with the regulatory requirements of Criterion XII of Appendix B to 10 CFR Part 50.

9. Handling, Storage, and Shipping

a. Inspection Scope

The NRC inspection team reviewed SMCI's policies and implementing procedures that govern the handling, storage, and shipping program to verify compliance with the requirements of Criterion XIII, "Handling, Storage, and Shipping," of Appendix B to 10 CFR Part 50.

The NRC inspection team reviewed the onsite storage and handling of materials which included the control and segregation of carbon and stainless steel, and the support and protection for CA03 Modules 06, 07, 08, 09 and 10 currently in fabrication. The NRC

inspection team also reviewed the classification and use for the storage level B, C, and D areas in accordance with Subpart 2.2, "Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage, and Handling of Items for Nuclear Power Plants," of the American Society of Mechanical Engineers Nuclear Quality Assurance-1-1994 Edition.

The NRC inspection team observed the temporary storage of duplex stainless steel plates after the plates were cut by water-jet at the Rubingers facility. Rubinger is a commercial sub-supplier of water-jet cutting services for SMCI. Although Rubinger does not have a QA program (QAP) that meets the requirements of Appendix B to 10 CFR Part 50, Rubinger performs the water-jet cutting services under SMCI's QAP.

The NRC inspection team discussed the handling, storage, and shipping program with SMCI's management and technical staff. The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team determined that SMCI is implementing its nonconforming materials, parts, or components program in accordance with the regulatory requirements of Criterion XIII of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team also determined that SMCI is implementing its policies and procedures associated with handling, storage, and shipping. No findings of significance were identified.

10. Oversight of Contracted Activities and Internal Audits

a. Inspection Scope

The NRC inspection team reviewed SMCI's policies and implementing procedures that govern the implementation of its oversight of contracted activities and internal audits program to verify compliance with the requirements of Criterion IV, "Procurement Document Control," Criterion VII, "Control of Purchased Material, Equipment, and Services," and Criterion XVIII, "Audits," of Appendix B to 10 CFR Part 50.

The NRC inspection team reviewed a sample of POs issued in support of the AP1000 IRWST modules and the system used to track those POs. The NRC inspection team also verified a sample of CMTRs and certificates of compliance associated with the IRWST modules. In addition, the NRC inspection team reviewed a sample of external and internal audits. The NRC inspection team confirmed that the audit reports contained objective evidence of the review of the relevant QA criteria of Appendix B to 10 CFR Part 50. For audits that resulted in findings, the NRC inspection team verified that SMCI initiated adequate corrective actions. SMCI's audit program also includes the performance of annual evaluations of suppliers. For a sample of annual evaluations, the NRC inspection team verified that these were performed in accordance with SMCI's procedures and contained all the required information.

The NRC inspection team discussed the oversight of contracted activities and internal audit programs with SMCI's management and technical staff. The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team determined that SMCI is implementing its oversight of contracted activities in accordance with the regulatory requirements of Criterion IV, "Procurement Document Control," Criterion VII, "Control of Purchased Material, Equipment, and Services," and Criterion XVIII, "Audits," of Appendix B to 10 CFR Part 50. Based on the limited sample of documents reviewed, the NRC inspection team also determined that SMCI is implementing its policies and procedures associated with the oversight of contracted activities. No findings of significance were identified.

11. Training and Qualification of Personnel

a. Inspection Scope

The NRC inspection team reviewed SMCI's policies and implementing procedures that govern the training and qualification program to verify compliance with the requirements of Criterion II, "Quality Assurance Program," of Appendix B to 10 CFR Part 50.

The NRC inspection team reviewed SMCI's long-range and short-range training plans and the system used to track training. The NRC inspection team reviewed the indoctrination, training and qualification of lead auditors and auditors, nondestructive examination personnel, QC personnel, and welding personnel to ensure that proficiency is achieved and maintained. The NRC inspection team verified that all personnel performing activities affecting quality had completed the required training and met all the specified requirements in accordance with SMCI's policies and procedures.

The NRC inspection team discussed the training and qualification program with SMCI's management and technical staff. The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

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

12. Entrance and Exit Meetings

On April 7, 2014, the NRC inspection team discussed the scope of the inspection with Mr. Robert Smickley, Chief Executive Officer, and other members of SMCI's management and technical staff. On April 11, 2014, the NRC inspection team presented the inspection results and observations during an exit meeting with Mr. Tim Ennis, Acting General Manager, and other members of SMCI'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 AND EXIT MEETING ATTENDEES

Name	Title	Affiliation	Entrance	Exit	Interviewed
Robert Smickley	Chief Executive Officer	Specialty Maintenance & Construction, Inc. (SMCI)	X		
Tim Ennis	General Manager	SMCI	X	X	X
Cameron Ott	Operations Manager	SMCI	X	X	X
Russell Stone	Quality Manager	SMCI	X	X	X
George Lynn	Supplier Quality Manager	SMCI	X	X	X
Earl Hissen	Material Manager	SMCI	X	X	X
Gamal Handal	Engineering Manager	SMCI	X	X	X
John L. Simmon	Project Manager	SMCI	X	X	X
James Parker	Project Manager	SMCI			X
Joe Shinn	Project Manager	SMCI	X	X	X
John L. Ashcroft	American Welding Society Certified Welding Inspector	SMCI			X
Mark Gresham	East Bay Shop Supervisor	SMCI			X
Maricelli Rodríguez	Quality Engineer	SMCI	X	X	X
Daniel Grannan	Quality Engineer	SMCI			X
Peter Furman	Welding Engineer	SMCI		X	X
Jonathan Woods	Non-Destructive Examiner Inspector Level II	SMCI			X
David Connelly	Non-Destructive Examiner Inspector Level II	SMCI			X
Owen Wolf	Welder	SMCI			X
Sid Slocumb	Welder	SMCI			X
Roger Henderson	Welder	SMCI			X
Daniel García	Welder	SMCI			X
Eric Roe	Welder	SMCI			X

Name	Title	Affiliation	Entrance	Exit	Interviewed
Noah Gerow	Quality Control (QC) Inspector	SMCI			X
Chris Gates	QC Inspector	SMCI	X	X	X
Anthony Osagie	QC Inspector	SMCI			X
Glenn Hawkins	QC Inspector	SMCI			X
Kevin Brown	Dimensional Inspector	SMCI			X
Mike Letchworth	Lead Paint	SMCI			X
Lance Ginn	Document Control	SMCI	X	X	X
Chris Bopp	Engineer	SMCI			X
Stephanie Licari	Purchasing	SMCI	X	X	X
Jason Nightlinger	Equipment Operator	Rubingers			X
Joe Ernst	Project Manager	Chicago Bridge & Iron (CB&I)	X	X	X
Dan Grannan	Project Manager	CB&I	X	X	X
Gary Pratt	Source Analyst	CB&I			X
Yamir Diaz-Castillo	Inspection Team Leader	NRC	X	X	
Jonathan Ortega-Luciano	Inspector	NRC	X	X	
Brent Clarke	Inspector	NRC	X	X	
Raju Patel	Inspector	NRC	X	X	
Robert Davis	Inspector	NRC	X	X	
Pravin Patel	Inspector	NRC	X	X	
Marieliz Vera	Inspector	NRC	X	X	
Steven Smith	Inspector	NRC	X	X	
Edward Roach	Branch Chief	NRC		X	

2. INSPECTION PROCEDURES USED

Inspection Procedure (IP) 36100, "Inspection of 10 CFR Part 21 and Programs for Reporting Defects and Noncompliance," dated February 13, 2012.

IP 36100.01, "Inspection of 10 CFR 50.55(e) Programs for Reporting Defects and Noncompliance during Construction," dated February 13, 2012.

IP 43002, "Routine Inspections of Nuclear Vendors," dated July 15, 2013.

IP 43004, "Inspection of Commercial-Grade Dedication Programs," dated November 29, 2013.

IP 65001.01, "Inspection of ITAAC-Related Foundations and Buildings," dated October 3, 2007.

IP 65001.A, "Inspection of the As-Built Attributes for Structures, Systems, and Components Associated with ITAAC," dated September 25, 2013.

IP 65001.F, "Inspection of the ITAAC-Related Design and Fabrication Requirements," dated September 20, 2013.

3. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Item Number	Status	Type	Description	Applicable ITAAC
99901439/2014-201-01	Opened	NON	Criterion IX	N/A
99901439/2014-201-02	Opened	NON	Criterion XV	N/A

4. INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA

The U.S. Nuclear Regulatory Commission (NRC) inspection team identified the following inspections, tests, analyses, and acceptance criteria (ITAAC) related to components being fabricated and inspected by SMCI. At the time of the inspection, fabrication of the remain-in-place steel form work modules for concrete and in-containment refueling water storage tank wall sub-modules for Vogtle Electric Generating Station Units 3 and 4. For the ITAAC listed below, the NRC inspection team reviewed SMCI's quality assurance controls in the areas of design control, inspection, nonconforming materials parts and components, and corrective actions. The ITAAC's design commitments referenced below are for future use by the NRC staff during the ITAAC closure process; the listing of these ITAAC design commitments does not indicate that they have been met and closed. The NRC inspection team did not identify any findings associated with the ITAAC identified below.

Appendix C to the Combined License for Vogtle Electric Generating Plant Unit 3	No. 760	ITAAC 3.3.00.02a.i.a
Appendix C to the Combined License for Vogtle Electric Generating Plant Unit 4	No. 760	ITAAC 3.3.00.02a.i.a

5. DOCUMENTS REVIEWED

Policies and Procedures

- Specialty Maintenance and Construction, Inc.'s (SMCI's) Quality Assurance Manual, Revision 6, dated December 9, 2013
- Quality Procedure (QP) 2.0, "Indoctrination, Training, and Qualification of Personnel," Revision 1, dated October 12, 2012
- QP-2.1, "Qualification and Certification of QC Personnel," Revision 1, dated October 12, 2012

- QP-2.2, "Quality Assurance Auditor and Lead Auditor Training and Certification," Revision 1, dated October 12, 2012
- QP-2.3, "Written Practice for Qualification and Certification of NDT Personnel," Revision 0, dated March 24, 2014
- QP-3.2, "Engineering Change Notice (ECN)," Revision 0, dated January 29, 2014
- QP-4.0, "Control of Purchasing," Revision 2, dated October 12, 2013
- QP-5.3, "Manufacturing Travelers," Revision 1, dated May 10, 2013
- QP-6.0, "Document Control," Revision 2, dated October 19, 2012
- QP-7.0, "Supplier Evaluation and Selection," Revision 2, dated July 5, 2013
- QP-7.1, "Receiving Inspections," Revision 2, dated July 3, 2013
- QP-7.3, "Commercial Grade Dedication," Revision 4, dated August 17, 2013
- QP-7.4, "Supplier Oversight," Revision 2, dated July 3, 2013
- QP-8.0, "Identification and Control of Materials, Parts, and Components," Revision 2, dated August 1, 2013
- QP-9.0, "Weld Filler Metal And Consumables Control," Revision 3, dated September 10, 2013
- QP-12.0, "Control of Measuring and Test Equipment," Revision 2, dated October 19, 2012
- QP-12.1, "Third Party Calibration Supplier," Revision 1, dated October 19, 2012
- QP-13.0, "Material Handling, Storage and Shipping," Revision 1, dated October 19, 2012
- QP-15.0, "Nonconformance," Revision 1, dated October 19, 2012
- QP-16.0, "Corrective Action," Revision 1, dated October 19, 2012
- QP-17.0, "QA Records," Revision 1, dated October 19, 2012
- QP-18.0, "Quality Assurance Audit," Revision 3, dated July 5, 2013
- Quality Procedure Work Instructions (QP-WI) 3.0, "Shipment of Materials," Revision 0, dated October 19, 2012
- QP-WI-CUT01, "Laser, Plasma, & Water-Jet Cutting," Revision 3, dated September 16, 2013
- QP-WI-ROL01, "Material Forming," Revision 0, dated October 8, 2013

- Standard Welding Procedure 001, "QA Procedure for Stud Welding," Revision 6, dated November 6, 2013
- SMCI NPT QAP-10B, "Visual Examination Test Procedure," Revision A, dated March 21, 2011
- SMCI NPT QAP-9A, "Penetrant Examination Test Procedure," Revision A, dated March 21, 2011
- SMCI-TEAM-UT-AWS.5.1999, "TEAM Ultrasonic Examination of Groove Welds: Structural Welding Code Stainless Steel," Revision 0
- Form NCR-001, "NCR Report," Revision 1, dated January 2, 2014

Design Documents

- Westinghouse Electric Corporation (WEC) APP-CR01-Z0-011, "Design Specification for Furnishing of Safety-Related Reinforcing Steel, Westinghouse Safety Class C "Nuclear Safety Related," Revision 4, dated August 11, 2011
- WEC APP-VL52-ZO-023, "Material Specification for ASTM A240, UNS S32101, Duplex Stainless Steel Plate," Revision 2, dated March 9, 2012
- WEC APP-VW20-ZO-023, "Welding Specification for ASTM A240 UNS S32101 Duplex Stainless Steel Plate," Revision 3, dated February 11, 2011
- WEC APP-GW-Z0-602, "AP1000 Cleaning and Cleanliness Requirements of Equipment for Use in Nuclear Supply and Associated Systems," Revision 3, dated February 18, 2013
- WEC APP-G1-SX-001, "AP1000 Painting of Shop Fabricated Steel," Revision 6, dated June 15, 2012
- WEC APP-VW01-Z0-001, "Structural Module Shear Stud Welding Specification," Revision 2,
- APP-CA03-S5X-09001, "Containment Building Module CA03 Submodule CA03-09 Index," Revision 5, dated June 17, 2011
- APP-CA03-S5B-09001, "Containment Building Module CA03 Submodule CA03-09 Bill of Materials," Revision 5, dated June 17, 2011
- APP-CA03-S5-09001, "Containment Building Module CA03 Submodule CA03-09 Isometric Views," Revision 3, dated June 17, 2011
- APP-CA03-S5-09002, "Containment Building Module CA03 Submodule CA03-09 Breakdown," Revision 3, dated June 17, 2011
- APP-CA03-S5-09003, "Containment Building Module CA03 Submodule CA03-09 Structural Outline Vertical Sections/Views," Revision 4, dated June 17, 2011

- APP-CA03-S5-09004, "Containment Building Module CA03 Submodule CA03-09 Structural Outline Horizontal Sections/Views," Revision 4, dated June 17, 2011
- APP-CA03-S5-09005, "Containment Building Module CA03 Submodule CA03-09 Structural Outline Specific Details," Revision 4, dated June 17, 2011
- APP-CA03-S5-09006, "Containment Building Module CA03 Submodule CA03-09 Structural Outline Specific Details II," Revision 0, dated November 15, 2010
- APP-CA03-S5-09007, "Containment Building Module CA03 Submodule CA03-09 Breakdown II," Revision 0, dated November 15, 2010
- SMCI Request For Information-APP-CA03-GF-850071, for ASTM E262 Method A for Verifying Material contains 40-60% Ferrite, dated December 18, 2013
- SD-P01, "CA03 Modules 5,6,7,8,9,10,11,12,13,14,15,16," Revision 1, dated March 12, 2014
- SD-T01, "T-Section Web," Revision 1, dated March 12, 2014
- SD-T02, "T-Section Flange," Revision 1, dated March 12, 2014
- SD-T03, "T-Section Weldment," Revision 3, dated March 12, 2014
- CA03-PA1, "CA03 Panel Section Weldment," Revision 0, dated July 18, 2013
- CA03-SW1, "CA03 Stud Welding Modules -02 thru -16," Revision 0, dated July 29, 2013
- SD-CA03-H03, "CA03 Head Assembly 3 (Module 09)," Revision 0, dated February 23, 2014
- SD-CA03-MA-09, "CA03 Main Assembly Module 09 (Pages 1-4)," Revision 0, dated March 14, 2014
- SD-Pipe-11, "Pipe 1 Weldment," Revision 1, dated January 29, 2014
- SD-Pipe-2, "Pipe 2 Weldment," Revision 1, dated January 29, 2014
- SD-Pipe-3, "Pipe 3 Weldment," Revision 1, dated January 29, 2014
- Commercial Grade Dedication Plan for Third Party Calibration Services, Revision 1, dated August 1, 2013
- Commercial Grade Dedication Plan for: 919S13-A572-PLT A572 Plate Materials to be used in a CB&I Nuclear Safety Related Application, Revision 1, dated September 25, 2013

Calibration, Heat Treatment, Non-Destructive Examination, Inspection and Material Reports

- WM-CA03-H01, "SMCI Welding Traveler CA03 Module 07-H01," Revision 0 (no date provided)

- Certificate of Conformance (CoC) and Certified Material Test Report (CMTR) from Lincoln Electric Company, 510 lbs of 3/32 inch Blue Max Weld Filler Material from PO 32799, dated October 16, 2013
- CMTR from Weldstar Company for 10 lbs. 3/32" x 36" ARCOS ER316/316L GTAW wire, from PO No. 906112, dated December 7, 2013
- CMTR from Mackson Inc. for 120 pieces of 2"-4.5 UNC-2Ax6" large hexagonal socket cap screw to ASTM A540 Gr. B23, from PO No. 33397, dated March 25, 2014
- CoC and CMTR from Lincoln Electric Company, 1080 Kg of 1.2 mm Flux Core Weld Filler Material from PO 32799, dated October 16, 2013
- CoC and CMTR from Lincoln Electric Company, 510 lbs of 1/8 inch Blue Max Weld Filler Material for PO 32799, dated March 17, 2014
- CMTR for E71T-1M Weld Wire for POs Nos. 33073, Lot 95138, MI15516
- CMTR for E71T-1M Weld Wire for PO No. 32576, Lot 95138, MI14990
- CMTR for ASTM A36 steel plate for PO No. 50325, Heat # 3504036, Material Identification Numbers N014 and N015
- CoC from Lincoln Electric Company, 30 count - 10 lbs tube of 1/16 inch Techalloy 2209 from PO 32924, dated January 24, 2014
- CoC from Consolidated Power Company, Angle-L6 x 6 x 3/4 inch for PO 33388, Revision 1, dated February 19, 2014
- CoC from Consolidated Power Company for A240 TP 304L Plate for PO 33388, dated February 25, 2014
- Material Receipt Inspection Report (MRIR) for 1.2 mm Flux Core Weld Filler Material, dated November 8, 2013
- MRIR for 3/32 inch Blue Max Filler Material, dated November 8, 2013
- MRIR for 1/8 inch Flux Core Weld Filler Material, dated March 19, 2014
- MRIR for 30 count - 10 lb tube of 1/16 inch Techalloy 2209, dated January 24, 2014
- MRIR for 3200 pieces of Nelson Studs 7/8" x 8 3/16", dated October 7, 2013
- MRIR for 500 lbs of GTAW Weld wire 3/32" Blue Max, dated November 5, 2013
- MRIR for 500 lbs of GTAW Weld wire 1/8" x 36" Blue Max, dated October 15, 2013
- MRIR for 15, 5/8" x 9'9" x 20' ASTM A240 S32101 Duplex stainless plates, dated December 12, 2013

- MRIR for 504" x 120 7/8"x 240 1/4" ASTM A36 steel plates, dated October 25, 2013
- MRIR for 56, 3/4" x 96" x 240" ASTM A240 S32101 Duplex stainless plates, dated January 16, 2014
- MRIR for 56, 3/4" x 96" x 240" ASTM A240 S32101 Duplex stainless plates, dated January 16, 2014
- MRIR for 2, 5/8"x 9'9"X20" ASTM A240 S32101 Duplex plates, dated December 12, 2013
- MRIR for 15 kg, 1.2mm COR-A-ROSTA P4462, dated November 8, 2013
- MRIR for 1/2" x 96"x 240' ASTM A240 S32101 Duplex stainless plates, dated November 14, 2013
- MRIR-001 for 510 lbs. of 3/32"- Blue Max LNT 4462 GTAW wire, dated November 5, 2013
- Pre-Fabrication Traveler (PFT) for water-jet cut at Rubinger, Plate 5/8"x117"x240", ASTM A240 S32101 Duplex, HT# 857155-1B, for CA03-14 & CA03-004
- PFT for water-jet cutting at Rubinger, Plate 5/8"x117"x240", ASTM A240 S32101 Duplex, HT# 857151-1A, for CA03-14 & CA03-004A
- PFT for water-jet cutting at Rubinger, Plate 5/8"x117"x240", ASTM A240 S32101 Duplex, HT# 857432-1B, for CA03-014 & CA03-004A
- PFT for water-jet cutting at Rubinger, Plate 5/8"x117"x240", ASTM A240 S32101 Duplex, HT# 857155-2A, for CA03-014 & CA03-004A
- PFT for water-jet cutting at Rubinger, Plate 5/8"x117"x240", ASTM A240 S32101 Duplex, HT# 857155-2B, for CA03-014 & CA03-004A
- PFT for water-jet cutting at Rubinger, Plate 5/8"x117"x240", ASTM A240 S32101 Duplex, HT# 857432-1A, for CA03-014 & CA03-004A
- PFT for water-jet cutting at Rubinger, Plate 1/2"x96"x240", ASTM A240 S32101 Duplex, HT# 857154-6A, for CA03-007, & CA03-012, CA03-011
- PFT for water-jet cut at Rubinger, Plate 1/2"x96"x240", ASTM A240 S32101 Duplex, HT# 857076-3A, for CA03-012
- PFT for water-jet cutting at Rubinger, Plate 1/2"x96"x240", ASTM A240 S32101 Duplex, HT# 857493-1B, for CA03-011
- PFT for water-jet cutting at Rubinger, Plate 3/4"x96"x240", ASTM A240 S32101 Duplex, HT# 857404-5A, for CA03-005-A

- Weld Traveler for CB module 36-S5 for V.C. Summer Unit 2 for Chicago Bridge & Iron (CB&I) PO. No. 132177-D100.CB001
- Weld Traveler for CB module 33-S5 for V. C. Summer Unit 2 for CB&I PO. No. 132177-D100.CB013
- Weld Traveler for CA03 module 090-H03 for Vogtle Unit 3 for CB&I PO No. 132175-D100, CA006/Line 1
- Weld/Assembly Traveler for CB33-S5 module for V.C. Summer Unit 2 for Mackson/CB&I PO No. 132177-D100.CB011
- Weld Traveler for Drawing WM-APP-CB36-S5 Revision 1 for V.C. Summer Unit 2, CB module 36
- Weld Traveler for Drawing WM-APP-CB33-S5 Revision 1, V.C. Summer Unit 2, CB module 33
- Weld Traveler for Drawing WM-T02 Revision 1, CA03-Module 10 T02
- Weld Traveler for Drawing WM-T03 Revision 3, CA03-Module 06 T03
- Welding Procedure Specification (WPS) 1006, Revision 4, dated September 19, 2013
- WPS 1006, Revision 7, dated January 2, 2014
- WPS 1015, Revision 1, dated November 11, 2013
- Procedure Qualification Record (PQR) 1015, Revision 0, dated October 15, 2013
- PQR 1015-PJP, Revision 0, dated November 11, 2013
- PQR 1019, Revision 1, dated November 5, 2013
- PQR 1019, Revision 1, dated November 5, 2013
- PQR 1019-PJP, Revision 1, dated November 5, 2013
- PQR 1037, Revision 0, dated February 3, 2014
- PQR 1037, Revision 0, dated February 3, 2014
- PQR 1037-PJP, Revision 0, dated February 3, 2014
- PQR 1038, Revision 0, dated January 28, 2014
- PQR 1038, Revision 0, dated January 28, 2014
- PQR 1037-PJP, Revision 0, dated January 28, 2014

- Visual Examination Report for tack, fit-up and final inspection of weld joint Nos. 90E 3 of 3, 91E, 3 of 3, 92E and 93E 3 of 3 on Job No. 919S13, for CB36-S5 sub-module, dated December 11, 2013
- Visual Examination Report for SMCI Job No. 919S13, CB33-S5 module for tacks, fit-up and final inspection of all final welds, dated January 23, 2014
- Magnetic Particle Inspection Report for final weld joint No. 91E 2 of 3, 92E 3 of 3 and 93E 1 of 3 for CB36-S5 sub-module on SMCI Job No. 919S13, dated December 11, 2013
- Robertson Microlit Laboratories Material Analysis Report No. 751, High Purity Black F.T. Q404 having Halogen and Sulfides less than 1ppm, dated February 3, 2012
- Chemical Test Reports C203450, C211921, C208447N, C206677N, C203452N
- Calibration records for the following equipment: micrometer (No. 032-30), calipers (Nos. 11392269, 22653A, 1107124, 5L166201, 06001068, SMC-43551), tape measure (Nos. 26063-N, SMC-016, SMC-07414), multimeter (No. SMC-21180), pressure gauges (Nos. SMC-21184, 173302), thermometers (Nos. SMC-90840, SMC-90849, SMC-21209, SMC-70106), photometer (No. 1815065), thread ring taper (No. 15924W), and welding machines (Nos. MD 240406V, MD 180187V)

Purchase Orders and Audit Reports

- Purchase Order (PO) No. 32567 to Consolidated Power Supply Company, Revision 0, dated August 19, 2013
- PO No. 32799 to Lincoln Electric, dated August 12, 2013
- PO No. 32856 to Mackson, dated August 20, 2013
- PO No. 33021 to Precision Metrology, dated October 4, 2013
- PO No. 33020 to Rubingers, Revision 0, dated October 4, 2013
- PO No. 33460 to Weldstar Company, Revision 0, dated February 15, 2014
- PO No. 32625, to Lincoln Electric, Revision 0, dated May 14, 2014
- PO No. 32567 to Consolidated Power Company, Revision 0, dated May 14, 2014
- SMCI's Approved Supplier List, dated March 21, 2014
- External audit of Consolidated Power Supply, dated April 2012
- External audit of The Lincoln Electric Company, dated September 2013
- External audit of Mackson, Inc., dated December 2012

- External audit of Weldstar Company, dated September 2013
- External audit of Applied Technical Services, dated July 2012
- Annual evaluation of Weldstar Company, dated April 19, 2013
- Annual evaluation of Mackson Inc., dated April 19, 2013
- Annual evaluation of Consolidated Power Supply, dated April 17, 2013
- Commercial-Grade Survey Report No. CMC-SC-EA-2013-01 of Commercial Metal Company, dated December 16, 2013
- Commercial-Grade Survey Report No. Nucor-SC-EA-2013-01 of Nucor Steel-Berkley dated, December 4, 2013
- Evaluation of Supplier Performance History for Siskin Steel dated January 30, 2013

Training and Qualification Records

- SMCI's Long and Short Range Training Plan
- Qualification Record, "Lead Auditor," Johnnie Poston, dated October 16, 2013
- Individual Training Record, "Multiple Topics," John L. Simon, dated February 25, 2014
- Individual Training Record, "Individual Training Procedure Review," Chris Bopp, dated March 3, 2014
- Individual Training Record, "Individual Training Procedure Review," Peter Furman, dated March 3, 2014
- Group Training Record, "Weld Machine Calibration" (no date available)
- Group Training Record, "SMCI QA Manual and Audit Procedure," dated October 14, 2013
- Group Training Record, "QP-3.2 Revision 1 Engineering Change Process," dated April 4, 2014
- Group Training Record, "QP-WI-CUT01, Laser, Plasma, and Water Jet Cutting, Revision 3," dated September 16, 2013
- Certification of Qualification List for NDE personnel dated March 20, 2012
- American Welding Society (AWS) Welder Continuity Reports, dated April 7, 2014
- Welding Performance Qualification for Brian Butler, AWS D1.1, WPS 1006, Flux Cored Arc Welding, dated October, 16, 2013

- Welding Performance Qualification for Nelson Del Campo, AWS D1.1, WPS 1006, Flux Cored Arc Welding, dated August 20, 2013
- Welding Performance Qualification for Daniel García, AWS D1.1, WPS 1006, Flux Cored Arc Welding, dated October, 16, 2013
- Welding Performance Qualification for Saulo Mazengas, AWS D1.1, WPS 1006, Flux Cored Arc Welding, dated October, 16, 2013
- Welding Performance Qualification for Owen Wolf, AWS D1.6, WPS 1019, Gas Tungsten Arc Welding, dated September 12, 2013 and WPS 1015, Flux Cored Arc Welding, dated November 21, 2013
- Welding Performance Qualification for Michael Milbauer, AWS D1.6, WPS 1019, Gas Tungsten Arc Welding, dated March 3, 2014 and WPS 1015, Flux Cored Arc Welding, dated February 25, 2014
- Welding Performance Qualification for Sid Slocumb, AWS D1.6, WPS 1019, Gas Tungsten Arc Welding, dated November 28, 2013 and WPS 1015, Flux Cored Arc Welding, dated November 19, 2013
- Certification and Qualification for Jonathan Wood as Level II in Magnetic Testing (MT), Penetrant Testing (PT), Visual Testing (VT), Radiographic Testing (RT) and Ultrasonic Testing (UT) certified on December 17, 2013
- Certification and Qualification Record for Christopher D. Gates as Level II Quality Mechanical Inspector, PT, VT, and MT certified on February 5, 2014
- Certification and Qualification Record for William Long as Level I Quality Mechanical Inspector certified on October 18, 2013
- Certification and Qualification Record for Drew Jeffries as Level II Quality Mechanical Inspector, PT, VT, and MT certified on February 4, 2014
- Certification and Qualification Record for David Connelly as Level II Quality Mechanical Inspector, PT, VT, and MT certified on March 6, 2014
- Certification and Qualification Record for Kenneth Grochulski as Level II Quality Mechanical Inspector certified on October 26, 2012
- Certification and Qualification Record for David Leach as Level II Quality Mechanical Inspector certified on November 8, 2013
- Training records for the following staff from the water-jet cutting facility: Glen Hawkins, John Walker, Anthony Ratley, Jonathan Jackson, Luis Castro, Mike McMullen, Hidi Nightlinger, Chris Nightlinger, Jason Nightlinger, and John Nightlinger

Nonconformance Reports

- 3, 5, 12, 17, 20, 24, 30, 32, 34, 36, 38, 51, 53, 54, 57, 58, 59, 62, 63, 64, and 65

Corrective Action Reports

- 1, 3, 11, 12, 17, 20, 21, 21, 22, 24, 28, 30, 31, 32, 38, 53, 57, 63, 65, 88, 92, 94, 111123, 130211, and 131025

Corrective Action Reports Generated during the NRC Inspection

- 97, 99, 100, 104, 105, 108, 109, 110, 111, 113, 114, 115, 116, 118, 121, 122, 123, and 125