MetalTek INTERNATIONAL
BECAUSE YOU DEMAND MORE THAN METAL

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June 6, 2014

United States Nuclear Regulatory Commission
Attn: Document Control Desk
Mechanical Vendor Inspection Branch
Division of Construction Inspection and Operational Programs
Office of New Reactors
Washington, DC 20555-001

Subject: Reply to Notice of Nonconformance
NRC Inspection Report No. 99901439/2014-201

Reference: Letter from Edward Roach (NRC) to Russell Stone (MetalTek International), U.S. Nuclear Regulatory Commission Inspection Report No. 99901439/2014-201 and Notice of Nonconformance, dated May 16, 2014

Dear Mr. Roach,

In response to the referenced NRC Notice of Nonconformance (NON), MetalTek International SMCI Division (SMCI) herewith provides the enclosed reply (Enclosure). This Reply addresses nonconformances identified in NRC Inspection Report No. 99901439/2014-201 related to Criterion IX (Control of Special Processes) and Criterion XV (Nonconforming Materials, Parts, or Components) of the SMCI Quality Manual respectively.

Pursuant to the NRCs instructions specified in the Notice of Nonconformance, the Enclosure addresses for each of the NONs, identified as 99901439/2014-201-01 and 99901439/2014-201-02: 1) the reason for the noncompliance; 2) the corrective steps that have been taken and the results achieved, 3) the corrective steps that will be taken to avoid future noncompliance; and 4) the date when the corrective actions will be completed.

SMCI understands the feedback received from the NRC during the inspection and in the published Inspection Report. We take that feedback very seriously; we recognize that the utmost attention to this feedback is the necessary response and have either completed or initiated actions to remedy the specific findings provided to avoid further noncompliance.

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Sincerely,

Russell Stone
Quality Manager
MetalTek International, SMCI Division

Tim Ennis
General Manager (Acting)
MetalTek International, SMCI Division

Enclosure: SMCI Reply to Notice of Nonconformance 99901439/2014-201-01 AND 99901439/2014-201-02

SMCI REPLY TO NOTICE OF NONCONFORMANCE 99901439/2014-201-01 AND 99901439/2014-201-02

This is the SMCI Reply to the Notice of Nonconformance identified in NRC Inspection report No. 99901439/2014-201, dated May 16, 2014.

NONCONFORMANCE 99901439/2014-201-01

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.

1. **The Reason for the Noncompliance**

Corrective Action Report (CAR) 2014-116 was initiated to document this issue. The apparent cause for this noncompliance has been determined to be a failure to

properly document acceptance requirements of the design specification in the PQR.

2. **Corrective Steps That Have Been Taken and Results Achieved**

Fabrication processes using the associated Welding Procedure Specification (WPS), to this Procedure Qualification Record (PQR), were stopped and deliveries by SMCI, associated with the affected PQR, were stopped on April 9, 2014.

An extent of condition was performed on all SMCI WPSs to determine the effect on components in fabrication and potential effect on components delivered. This resulted in one additional WPS found with the same condition, WPS 1019. All fabrication activities associated with this WPS were also stopped and potential deliveries affected were identified and stopped.

All previously shipped components were reviewed for usage of the WPSs associated with these PQRs and no shipments were found to have been made that involved these WPSs.

PQRs 1015-PJP, 1019, and 1019-PJP were retested in accordance with APP-VW20-Z0-023 "Welding Specification for ASTM A240 UNS S32101 Duplex Stainless Steel," Revision 3 dated Feb 11, 2011. The testing was done to the same parameters as the original PQRs 1015-PJP, 1019, and 1019-PJP, and the results of the delta ferrite testing were found to be within the required specification of 35-65 percent ferrite.

Quality Procedure (QP) 3.2, "Engineering Change Notices," was revised prior to identification of this issue to provide for a more comprehensive review of engineering documentation prior to release to fabrication. This revision was not in place at the time of the original PQR testing, but has since been implemented to address similar type issues.

The affected activities listed above that were previously stopped have been resumed based on completion of these actions.

3. **Corrective Steps That Will Be Taken to Avoid Noncompliance**

NCRs 2014-167 and 2014-168 were generated to identify the existing condition and obtained disposition resolution from the customer. The NCR disposition were recommended to be "use as is" for all previously performed activities under the existing purchase orders using WPS 1015 and 1019.

To avoid future noncompliance, SMCI WPS generation procedure will be revised to require a technical peer check of the WPS prior to approval at SMCI and submission to the purchaser. A technical checklist will be developed for use during these reviews to prevent recurrence.

Root Cause Analysis is in progress and additional Corrective Steps will be identified at the time of its completion.

4. **Date When Corrective Actions Will Be Completed**

The corrective actions pertaining to the identified nonconformance (described previously) were completed by April 25, 2014. The root cause analysis and associated additional corrective steps will be identified and completed in accordance with the SMCI corrective action program.

NONCONFORMANCE 99901439/2014-201-02

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.

1. **The Reason for the Nonconformance**

This condition has been documented in Corrective Action Reports (CAR) 2014-104, 2014-109, and 2104-110.

Based on the findings of the root cause analysis of the Nonconformance issues, it was determined that these conditions were caused by a failure to follow procedure. An

additional causal factor includes inadequate resources to ensure the NCR process was appropriately followed.

Contributing Causes:

1) The existing NCR Program was found to be very burdensome due to the administrative difficulties of using a paper-based system.

2) NCR Program ownership was not adequately established to facilitate the program.

3) The NCR procedure does not have adequate detail to ensure consistent implementation or identify who is responsible for each action in the process.

4) The NCR procedure does not adequately delineate responsibilities. The responsibilities listed are mainly those of the Quality Department and not the actual stakeholders of the program.

5) Implementation of the NCR Log did not include adequate training of the responsible person.

6) Implementation of the NCR program did not include adequate training to ensure personnel understood and could perform NCR program tasks.

Additionally the apparent cause for the measuring and testing equipment (M&TE) issue has been determined to be a lack of understanding of how to disposition returned pieces of M&TE received out of calibration by the calibration supplier. Specifically, SMCI has determined there was inadequate procedural guidance available to provide clear guidance for the disposition these items.

2. Corrective Steps That Have Been Taken and Results Achieved

Two full time staff personnel have been assigned to manage and maintain the NCR Program.

The NCR procedure and form have been revised to establish a more robust and consistent nonconformance reporting process, including assigning responsibility to all stakeholders.

Training has been conducted with all SMCI personnel on the new procedure to include emphasis on the importance to SMCI.

The NCR's identified by the NRC have been or are being corrected and the required objective evidence is being compiled to support closure. Additionally, all 2014 NCRs were reviewed and any additional issues have been identified and are being resolved in the same manner.

SMCI evaluated the M&TE used and determined there were several instances of inadequate procedure adherence, these were identified by NCR, properly describing the nonconforming product, evaluated the potential use of the M&TE for 10 CFR Part 21 reportability, dispositioned with justification for the nonconforming items, and indicated this disposition on the NCR and completed closure of the nonconformance reports. There were no instances where the identified equipment was used in the fabrication of safety related components.

Quality Procedure 12.0, "Control of Measuring and Test Equipment," was revised to incorporate lessons learned from this condition to help prevent future occurrences. Training was provided to appropriate personnel within the organization on these revisions.

3. **Corrective Steps That Will Be Taken to Avoid Noncompliance**

1. Two additional staff, with industry experience in 10 CFR 50 Appendix B Criterion XV, are to be hired and assigned to the NCR program.

2. A computer-based NCR input and tracking program will be developed and implemented.

3. Root Cause Analysis is in progress and any additional corrective actions will be identified at the time of its completion and administered via the corrective action program.

4. **Date When Corrective Actions Will Be Completed**

1. Staff to be hired by July 16, 2014.

2. Complete correction of NCRs with inadequate documentation by June 13, 2014.

3. Computer-based program for NCR processing to be implemented by September 30, 2014.

4. The estimated completion date for this RCA is currently June 13, 2014. The RCA and associated corrective actions will be administered via the corrective action program.