



EMD
EMS Division
1000 Wright Way
Cheswick, PA 15024
T: 724.275.5671 | F: 724.275.5224
<http://emd.cwfc.com>

November 7, 2014

QA-2014-0044

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Reply to a Notice of Nonconformance

REF: 1. Docket No. 99901383
2. Nonconformance 99901383/2014-201-01

Gentlemen:

As required by the Nuclear Regulatory Commission's Inspection Report No. 99901383/2014-201 of their inspection conducted at the Curtiss-Wright Electro-Mechanical Division (EMD) facility in Cheswick, PA, on June 23-25, 2014, EMD submits the enclosed Reply to a Notice of Nonconformance.

Please direct any questions or concerns to me.

Yours sincerely,

Stewart A. Shannon, Sr. Director
Product Assurance
sshannon@curtisswright.com

cc: Chief, Mechanical Vendor Inspection Branch, Division of Construction and Operational Programs, Office of New Reactors, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001

Enclosure: Reply to a Notice of Nonconformance

LEOF
NRD

Noncompliance

As a result of the NRC Inspection of EMD, conducted June 23-25, 2014, the NRC inspection team issued Nonconformance 99901383/2014-201-01 in association with EMD not implementing the regulatory requirements of Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50.

As of June 25, 2014, EMD failed to perform effectiveness reviews (EFR) for significant conditions adverse to quality as required by EMD's corrective action program and failed to ensure that conditions adverse to quality were promptly identified and corrected.

Specifically,

- 1. The EMD corrective action program requires the performance of an EFR for significant conditions adverse to quality to document the appropriateness of root causes and corrective actions to prevent recurrence. Of the 17 significant conditions adverse to quality inspected, the NRC inspection team identified 7 for which no EFR was performed.*
- 2. EMD did not take actions that were timely or adequate to correct conditions adverse to quality as described below:*
 - o Corrective actions taken in response to NRC finding, NON 99901383/2009-201-03, related to the design review of action item chit forms were closed on March 26, 2010. The NRC inspection team verified that the action item chit forms have been reviewed, however, the NRC inspection team identified that the first annual self-assessment EMD committed to perform in response to the NRC finding was not completed until September 2011 and that no annual self-assessment has been performed since.*
 - o Out of the 38 inspected Corrective Action Requests (CARs) 9 were at least 7 days past the EMD assigned due date without justification. Of those, 7 were at least 30 days past the assigned due date without justification.*
 - o The corrective actions taken in response to CAR No. 2013-00175, which was closed March 6, 2014, have not been effectively implemented. The NRC inspection team identified several corrective actions that had not been verified by the lead responder and confirmed that IDPQ17 had not been revised to include guidance identifying a timeframe for verification of corrective actions.*

Reason for the Noncompliance

Over the last several years, EMD has undertaken improvement initiatives on its Corrective Action Process and System. Through these initiatives, EMD has adopted new methods that strengthen EMD's ability to identify problems and their causes. These new methods include: (1) A disciplined approach to root cause analysis using tools such as cause-mapping; (2) employees identified as coaches, trained in root cause analysis techniques; (3) an over-hauled on-line CAR system; and (4) a quality council. The Quality Council, which is conducted on a

quarterly basis and is comprised primarily of the General Manager's staff, evaluates the effectiveness of EMD's quality system using inputs such as trending reports from the CAR system.

Existing practices previously employed in the area of management oversight for CAR effectiveness reviews and on-time performance of CAR responses were not as robust to ensure appropriate actions were taken. New methods, described below, have been and will be adopted to address these two areas.

In regard to Nonconformance 99901383/2009-201-03, EMD did not add the requirement to complete a self-assessment into appropriate design procedures to ensure the assessment was completed annually.

Finally, EMD's procedure does not provide guidance on a timeframe in which CAR actions are to be verified.

Noncompliance

- 1. The EMD corrective action program requires the performance of an EFR for significant conditions adverse to quality to document the appropriateness of root causes and corrective actions to prevent recurrence. Of the 17 significant conditions adverse to quality inspected, the NRC inspection team identified 7 for which no EFR was performed.*

Corrective Steps Taken and Results Achieved

EMD opened CAR 2014-00231, in the corrective action program, for open CAR effectiveness reviews. Following the NRC Inspection, EMD launched the Corrective Action Review Board (CARB). The CARB, comprised of Quality Assurance department personnel and management, meets periodically to conduct EFRs. EMD identified a total of 24 CARs concerning safety related items with overdue EFRs. EMD has since completed all of these EFRs and has dispositioned the CARs in accordance with the quality program.

Corrective Steps That Will Be Taken to Avoid Noncompliances

The Corrective Action Review Board will continue to meet periodically to conduct EFRs. EMD will revise the procedure governing the function of the CARB to standardize its effectiveness review process.

Date Corrective Action will be Complete

EMD will revise the procedure governing the function of the CARB by December 19, 2014.

Noncompliance

2. *EMD did not take actions that were timely or adequate to correct conditions adverse to quality as described below:*
 - o *Corrective actions taken in response to NRC finding, NON 99901383/2009-201-03, related to the design review of action item chit forms were closed on March 26, 2010. The NRC inspection team verified that the action item chit forms have been reviewed, however, the NRC inspection team identified that the first annual self-assessment EMD committed to perform in response to the NRC finding was not completed until September 2011 and that no annual self-assessment has been performed since.*

Corrective Steps That Have Been Taken and Results Achieved

EMD opened CAR 2014-00129, in the corrective action program, for not conducting an annual self-assessment on the design review procedure. Since the NRC Inspection, EMD completed the self-assessment for adherence to the design review procedure for current projects requiring design work for safety related components, including AP1000. Although opportunities for improvement were identified through this assessment, there were no significant findings from the self-assessment. There were no recurrences of the original finding and no adverse effects on safety related components were identified.

Additionally, the current version of EMD's Corrective Action system includes a feature that was not in place at the time of the 2009 NRC inspection. CAR lead responders now have the ability to list specific corrective and preventive actions in each CAR's Action Plan. Each action has an owner and due date. Progress on completing these actions is now visible and monitored.

Finally, EMD has made significant changes to the design review procedure since the 2009 NRC Inspection. The goals of these changes were to improve consistency from design review to design review and to address design issues that were raised in the design review in a timely manner. Now, a core technical design review committee (TDRC) is formed at the early stages of a design program and the members are assigned for the life of the program. More frequent reviews are held throughout the design program and are timed based on program schedule needs. These reviews are more focused in scope than previous reviews and, thus, can now be more easily placed in the schedule as a prerequisite to completing a specific design or manufacture step in the program schedule. Risk matrices are required for each development program. Concerns raised by the TDRC are recorded, tracked and resolved on an ongoing basis at each TDRC review meeting.

Corrective Steps That Will Be Taken to Avoid Noncompliances

EMD will revise the design review procedure to include a requirement for a self-assessment and will complete another annual assessment within the next twelve months. In consideration of the design review process improvements described herein, if no significant findings are again identified in 2015, EMD will re-evaluate the need for conducting this self-assessment on an annual basis.

Date Corrective Action will be Complete

EMD will revise the design review procedure by December 19, 2014.

EMD will complete another annual assessment within the next twelve months.

Noncompliance

2. *EMD did not take actions that were timely or adequate to correct conditions adverse to quality as described below:*
 - o *Out of the 38 inspected Corrective Action Requests (CARs) 9 were at least 7 days past the EMD assigned due date without justification. Of those, 7 were at least 30 days past the assigned due date without justification.*

Corrective Steps That Have Been Taken and Results Achieved

EMD opened CAR 2014-00127, in the corrective action program, for CARs that are past their due dates. Following the NRC inspection, EMD's General Manager and his staff began reviewing the status of CARs during weekly staff meetings.

All the CARs (safety related and non-safety related) that were past their due date at the time of the NRC inspection have been addressed and are now on schedule.

Corrective Steps That Will Be Taken to Avoid Noncompliances

Each week, the General Manager and his staff meet at the General Manager's performance board to review key business performance metrics and to define appropriate countermeasures. EMD will add a specific metric for CAR performance to the General Manager's performance board to drive focused and routine management oversight of this aspect of EMD's quality management system.

Date Corrective Action will be Complete

EMD will add a metric for CAR performance to the General Manager's performance board by November 26, 2014.

Noncompliance

2. *EMD did not take actions that were timely or adequate to correct conditions adverse to quality as described below:*
 - *The corrective actions taken in response to CAR No. 2013-00175, which was closed March 6, 2014, have not been effectively implemented. The NRC inspection team identified several corrective actions that had not been verified by the lead responder and confirmed that IDPQ17 had not been revised to include guidance identifying a timeframe for verification of corrective actions.*

Corrective Steps That Have Been Taken and Results Achieved

EMD opened CAR 2014-00124, in the corrective action program, for open CAR verifications. All the CARs with actions that were waiting verification at the time of the NRC inspection have now been confirmed.

Corrective Steps That Will Be Taken to Avoid Noncompliances

EMD will add guidance to the corrective action procedure on timeframes for verification of corrective actions by the lead responder.

EMD will expand the agenda for the Corrective Action Review Board to include a review of CAR actions requiring verification.

Date Corrective Action will be Complete

EMD will revise the corrective action procedure by December 19, 2014.

EMD will expand the agenda for the CARB by November 14, 2014.