AAR QAC QUALITY NEWSLETTER

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INSIDE THIS ISSUE

2020 QUALITY ASSURANCE AUDITOR AND INDUSTRY CONFERENCE

Submitted by Don Guillen and Mark Rusovick - Transportation Technology Center, Inc.

The Association of American Railroad's Quality Assurance Committee (AAR QAC) has successfully executed the 2020 Quality Assurance Auditor and Industry Conference with support from the Rail Supply Institute's Quality Assurance Committee (RSI QAC). This year's conference was held on January 28-30 in Fort Worth Texas at the Historic Hilton Fort Worth hotel.

This year's event was reminiscent to past conferences, filled with informative M-1003 quality themed presentations, railway quality networking opportunities, great food, and a comfortable venue. The QA conference attendance continues to grow throughout the past several years as referenced in the adjacent chart.

Our keynote speaker on day one of the conference was Mrs. Lisa A. Stabler, President of the Transportation Technology Center, Inc. (TTCI). Mrs. Stabler's presentation on Root Cause Analysis & Corrective Action and Six Sigma described: Problem Types, Problem Solving Tools, Corrective and Preventive Action and Six Sigma Overview.

We would like to take this opportunity to thank Mrs. Stabler and the rest of the 22 presenters who made this year's conference a success.

For 2020, TTCI has decided to develop and improve the AAR Root Cause Analysis & Corrective Action training class materials so please look out for the Circular Letter announcing when registration is open for the new class.

There have been a lot of positive feedback on this year's conference and the AAR QAC contributes that to a change in the presentation style from previous years. One of the biggest changes the AAR QAC made was the style of the presentations given, changing from "how to audit"

presentations to:

- What is it?
- How to apply it?
- How to audit it?

Thanks to the RSI QAC, the three workshops given on day 3 of the conference (free to any conference attendee) were a huge success. All 3 sessions were at room capacity.

2020 Workshops:

- AWS D15.1 Advanced Welding Requirements
- Incorporating M-1003 Revisions into Your QA Manual
- Element 2.7 Document Control

The 2021 AAR Quality Assurance Auditors & Industry Conference will be the 33rd conference that the AAR QAC has been coordinating for the industry. The conference will be held at the same location at the Historic Hilton Fort Worth Hotel in Fort Worth, TX on January 26-28, 2021. Please reserve these dates and look for the AAR Circular Letter announcing when registration will open. We anticipate an even larger conference and look forward to seeing you there!

PROCESS AUDITING FOR IMPROVEMENT

Submitted by Jared Nelson – Progress Rail Services

A ***process audit*** examines the resources (equipment, materials, and people) used to transform the inputs into outputs, the environment, the methods (procedures and instructions) followed, and the measures collected to determine process performance. A process audit checks the adequacy and effectiveness of the process controls established by procedures, work instructions, flowcharts, training and process specifications.

A process audit is an evaluation of the sequential steps and interactions of a process within a system. For best results:

- ✓ Always audit utilizing the process procedure or a focused checklist.
- ✓ Audit entire processes, a defined scope for more complex processes or Critical to Quality items.

Steps to setting up and scheduling a successful process audit:

1. **Determine the scope of the audit:** Review the procedure and process to be audited. Are you going to audit one process and the associated procedure, or develop a focused checklist to look at one particular area of concern?
2. **Review the last audit and associated findings:** If there were corrective actions from last audit, add questions in the checklist to see if the corrective actions put in place were effective.
3. **A generic checklist can be developed that can be used during every process audit** that checks the following items:

a. Safety observations / concerns, i.e., are the employees wearing proper PPE / utilizing proper safety equipment?

b. Does the operator have any concerns regarding safety issues, equipment operational issues, etc.?

c. Has anything recently changed in how they perform their duties?

d. Training / qualifications of the personnel being audited.

e. Shelf life items for expiration dates / periods such as for rubber gaskets.

f. Are required consumables in place?

g. Are all gage / special process calibrations current?

h. Is the operator performing the required daily inspections/verifications?

i. Does the operator know where to find his / her work instruction?

4. **Schedule a time with management to perform audit**. Assure the needed personnel will be available that are qualified / trained to perform the process or procedure you are going to audit. Auditing should be completed as a result of normal operations utilizing the personnel, their backups and on different shifts to ensure the process is performed correctly.

5. **Perform audit using a procedure and/or checklist**. Follow closely to assure the procedure being utilized is followed step by step, noting any deviations. Verify that all equipment called out in the procedure is available, and within the stated calibration period, if applicable. Assure all procedures / associated forms or documents called out are the current revision.

6. **Give feedback** during the audit and ask questions to clarify, if needed.

7. At the completion of the process audit, give auditee verbal feedback summarizing your findings, any concerns you had during the process audit as well as positive observations. This is also a good time to solicit feedback from the employee on their ideas for improvement.

8. **Take pictures of findings, items of concerns as well as positive observations** found during the audit for good objective evidence. A photo can be worth a thousand words, and provides a snapshot in time of concerns or merit. These pictures will back up your findings and items of concern, as well as helping you to remember everything you reviewed.

9. **Plan to have your audit completed before the close out meeting is held with management**, including any corrective / preventative actions items. Your memory will fade and you may have follow-up questions when you prepare your report, so the sooner you can complete your audit report the better.

Have a Question?

Submit your M-1003 request for clarification or interpretation by emailing QA@aar.com.

Have an Idea for an Article?

Please submit your drafts to Bob Wolbert at bwolbert@progressrail.com or Annette Miller at armiller@progressrail.com.

10. If no findings are found or items of concern, you may **look at decreasing the frequency of your process audit**. If findings are found, then you may want to **increase the frequency** of your process audit until findings are eliminated.
11. **Send the formal audit report to the affected management team members completed with Corrective Action due dates as soon as the close out meeting has concluded.**
12. **Follow up and manage audit results for continuous improvement.** Ensure that all Corrective / Preventative actions assigned have been completed in a timely manner and utilize the needed tools to drive root cause determination.
13. **Use the observations and resulting corrective actions to update your PFMEA to capture the improvements made to the process.**

    As an auditor, you can provide valuable input affecting your team by identifying opportunity areas for continual improvement. A fresh set of eyes on a process can identify things that people who work closely with the process every day do not see, so rotating team members performing audits is a good idea. We audit to ensure compliance to our process as defined by procedures, but the real satisfaction of auditing comes with the engagement of the team to continual improve our processes.

VIEWS AND INTERPRETATIONS

(Interpretations in this section are official and subject to audit for compliance. Items below will generally be included in the revisions to M1003 specification or Appendix C containing other interpretations not readily consistent with incorporation into the M1003 specification.)

Q: Is it OK to say "NA" to every element of section 2.24 Design Control?

A: A number of questions have arisen over the applicability of 2.24 Design Control element. Be advised that it is NEVER ACCEPTABLE to indicate that this area is not applicable to your operation. Design Control Section 2.24.4 covers design output. Whether or not you are involved in the original design becomes irrelevant. All contractors must verify the output of their work, whether it be to a drawing or conformance to a technical standard or Field Manual Rule.

Q: I don't design; I manufacture, remanufacture or recondition / repair – so how does this affect me?

A: Any business that processes items designed by others sooner or later will come upon the situation where the original design is altered on the piece or part that they are working on. The intent of the M-1003 specification is to verify that there is a procedure in place, so that the worker does not make a change outside of the provided design, technical specification or regulatory requirement for that item.

QUALITY ASSURANCE AUDIT HANDBOOK

Submitted by Don Guillen - Transportation Technology Center, Inc.

The AAR Quality Assurance Committee has developed an M-1003 Quality Assurance Audit Handbook for industry information. The handbook describes some of the AAR Accredited Auditors protocols on how they manage/perform M-1003 Quality Assurance audits. Here are some of the handbook's topics:

- How to plan and schedule audits
- Description of the audit process
- How audit criteria is selected

- Open and closing meeting protocols
- Description of the AAR's five step Root Cause and Corrective Action (RCCA) process
- 7.1 nonconformance reports review
- Auditing protocols

Once AAR Quality Assurance Committee finalizes and approves the M-1003 Quality Assurance Audit Handbook, expected completion date is April 1, it will be located on the AAR M-1003 Quality Assurance Committee webpage under the Frequently Asked Questions tab, which can be located at the link below:

http://www.aar.com/standards/FAQ.html

QUALITY AND PURCHASING DEPARTMENTS - IT IS A TEAM EFFORT - M1003 REQUIREMENTS FOR PURCHASING/SUBCONTRACTING 2.9

Submitted by Ben Masters and David Barczak – Progress Rail Services

M1003 Requirement	Examples / demonstrating compliance	Common Failure Modes
2.9.1 The facility shall: **2.9.1.1 Identify products to be purchased or subcontracted.** **2.9.1.2 Determine for those subcontracted and purchased products an appropriate method of verifying that the products/services conform to specified requirements. Typical methods include but are not limited to the following:** **2.9.1.2.1 Inspection by subcontractor.** **2.9.1.2.2 Source inspection by facility.** **2.9.1.2.3 Incoming inspection.** **2.9.1.2.4 Evidence, such as certificates of compliance.** **2.9.1.2.5 Surveillance of subcontractor.**	Developed and implemented procedure that identifies items being subcontracted or purchased that impact quality of the final product.	Failure to address subcontract services utilized when allowed by the technical standard. Failure to identify the products and suppliers authorized to be incorporated into the final product. Failure to identified CTQ requirements for suppliers of subcontracted services.
2.9.1.2 Determine for those subcontracted and purchased products an appropriate method of verifying that the products/services conform to specified requirements. Typical methods include but are not limited to the following: **2.9.1.2.1 Inspection by subcontractor.** **2.9.1.2.2 Source inspection by facility.** **2.9.1.2.3 Incoming inspection.** **2.9.1.2.4 Evidence, such as certificates of compliance.** **2.9.1.2.5 Surveillance of subcontractor.**	Developed and implemented procedure that defines the inspection process and how it occurs. Considerations should also be given for your customers to also perform source inspections to ensure the quality of the product they are being provided by your company when defined in the contract. Define what records of compliance will be maintained from suppliers.	Failure to define in detail what the method of verification will be for products/services. Failure to define CTQ requirements for inspection. Failure to adequate part sampling is utilized.

2.9.1.3 Evaluate and select subcontractors based on documented assessments of their ability to meet contract and quality requirements.	Developed and implemented procedure to ensure that the supplier or subcontractor have the capabilities to provide products that conform to the requirements deemed necessary by the contract? Consider on time deliveries, pricing, all required quality attributes maintained.	Failure to ensure that supplier or subcontractor have obtained required industry certification for a product or service. Failure to understand all government and or regulatory requirements for a product or service. Failure to ensure that a supplier or subcontractor has been approved prior to use.
2.9.1.4 Survey and audit subcontractor's verification of quality at the subcontractor's plant or the site of processing as and when required.	Developed and implemented procedure to implement process of verification. Available records that provide proof of documented verification process.	Failure to maintain records of verification. Failure to follow through with ITP requirements for verification.
2.9.1.5 Maintain quality records of acceptable subcontractors.	Developed procedure for method of creating and maintaining Approved Vendor Listing including requirements for record retention.	Failure to have a vendor added to the AVL. Failure to maintain and/or update quality records as described in the procedure.
2.9.2 Purchasing documents shall contain data clearly describing the items ordered, including the following, where applicable: **2.9.2.1 The type, class, grade, or other precise identification, including AAR specification, drawings, or other technical specifications.** **2.9.2.2 The title or other positive identification—and applicable issues—of specifications, drawings, process requirements, inspection instructions, and other relevant technical data, including requirements for approval or qualification of items, procedures, process equipment, and personnel.** **2.9.2.3 The title, number, and issue of the quality standard to be used.** **2.9.2.4 The verification arrangements and method of product release.**	Developed procedure requiring information that clearly describes and defines product to be purchased so as to prevent incorrect material being shipped. Process implemented for audit of purchasing documents. Procedure that defines quality requirements where applicable for the product being purchased.	Failure to include specific requirements in procedure that include unique product identifiers. Failure to review purchasing documents to ensure that materials were ordered utilizing specified requirements for item descriptions.

2.9.3 The facility shall review and approve purchasing documents for adequacy of the specified requirements prior to release.	Developed procedure that defines who will perform these tasks. Defining training requirements to allow those with the authority to carry this out success in recognizing deficiencies and/or satisfactory results.	Failure to adequately define requirements in purchasing documents. Failure to ensure that adequate training has been completed.
2.9.4 When specified in the contract, the facility's customers shall be afforded the right to verify at the subcontractor's plant and on the facility's premises that subcontracted items conform to specified requirements. Verification by the customer shall not absolve the facility of the responsibility to provide acceptable service, nor shall it preclude subsequent rejection by the customer.	Developed procedure to define requirement in the contact when necessary.	Failure to define requirement during contract review.

CALENDAR OF EVENTS AND IMPORTANT LINKS

2020 Calendar of Events

Training	Date	Location
Basic Auditor Training Class	June 16-18	San Diego, CA
	August 25-27	Colorado Springs, CO
	September 22-24	Nashville, TN
	September 22-24	Guadalajara, MX
	November 10-12	New Orleans, LA
Advanced Auditor Training Class	May 26-28	Sahagun, Hgo. MX
	July 28-30	Colton, CA
	Sept. 29-Oct. 1	Jacksonville, FL
	November 17-19	Greenville, SC
Root Cause & Corrective Action Class	June 11-12	Denver, CO
	October 20-21	Orlando, FL

Important Links

Registry of M-1003 Certified Companies

M-1003 Frequently Asked Questions

AAR M-1003 Certification on-line Application

AAR M1003, Section J Specification for Quality Assurance

AAR Training Schedule

AAR Circulars

MSRP Publication Current Revision Status

AAR Online Material Nonconformance Reporting System (Chapter 7)

Railway Supply Institute

RSI QAC & Previous Newsletters

RSI Tank Car Resource Center

The AAR QA Newsletter is provided through the efforts of AAR Quality Assurance Committee members in an effort to provide information that is important to our industry in support of improving the quality of products and services provided. You can support this process by submitting your questions and ideas for improvement to QA@aar.com.

The following are the AAR QAC team members:

BNSF Railway (Chair) - Michael Anderson, Compliance Manager
Amtrak (Vice-Chair) - Tony Parolsi, Director, Quality Management
Canadian Pacific Railroad - Gordana Halvadzija, Manager, Quality Assurance
Central Maine & Quebec Railway - Chad Mowery, Vice President of Operations
CSX Transportation - Randall Norman, Manager, Mechanical Car Engineering
Greenbrier - Adrian Morgan, Director Quality Engineering & Warranty Admin.
New Orleans and Gulf Coast Railroad - Tracy Ulm, Chief Mechanical Officer
Norfolk Southern Corporation - Brad Brenneman, Quality Assurance Supervisor
Pan Am Railways - Wakine Lucas, Director of Quality Assurance & Mechanical Training
Progress Rail Services - Bob Wolbert, Vice President of Quality
Standard Steel, LLC - Mark Lumadue, Director of Quality Assurance
TTX Company - Richard Szromba, Director of Operational Excellence
Union Pacific Railroad - Sanjay Varma, Director-Supplier Quality
Union Tank Car Company - Jason Riggs, VP, Quality & Regulatory Compliance
Watco Companies, LCC - Alan Keneipp, Vice President Mechanical Training & Comp

Questions please contact Don Guillen or Mark Rusovick of the Quality Assurance Committee.