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EVALUATING THE EFFECTIVENESS OF INTERNAL AUDITS – A VALUE-ADDED APPROACH

Submitted by Jake Sternberg – AITX

Section 2.21 of the M-1003 Specification defines the requirements for “*Internal Quality Audits*”. Paragraph 2.21.1 states, “*The facility shall conduct internal audits to verify compliance and effective implementation of their Quality Assurance Program.*”

It’s probably accurate to assume that your organization or facility receives multiple audits a year, examples include AAR M-1003, AAR MID, Customer based, FRA, etc. It’s also likely that these audits generally focus on verifying compliance. Compliance auditing verifies conformance to a regulation or standard, such as the M-1003 Specification. Internal compliance audits help prepare the facility for

external compliance audits. While compliance auditing is necessary, the focus is on compliance to the specification and not the effectiveness of the Quality Assurance (QA) Program. Looking back at M-1003 2.21.2, if compliance is verified multiple times a year through external auditing, perhaps the focus of internal auditing should on verifying the *effective* implementation of the QA Program.

A common definition for effectiveness is the degree to which something is successful in producing a desired result. What is the desired result of the QA Program and how can the results be verified?

It is important to recognize that a QA Program is a system made up of individual processes, such as Document Control, M&TE (measuring & testing equipment), and Training. The effectiveness of each process can be evaluated by performing process audits. While process auditing can be useful in evaluating effective implementation of the QA Program, an in-depth discussion of process auditing is outside the scope of this article. Instead, this article will focus on several techniques that may be used to better evaluate the process and add value during an internal audit.

There is a saying, “*Once is chance, twice is coincidence, and three times is a pattern.*” Audit findings that identify an instance lead to correction of that instance. For example, Gauge XYZ was identified as not having a calibration sticker. To correct this issue, a new calibration sticker was added to Gauge XYZ. Audit findings that identify patterns or recurring issues lead to correction of that pattern, which often means correcting the process that created the issue.

Bounding the issue can be a useful tool for an auditor. When an issue is identified, dig into the issue and determine if the issue is an isolated instance or a symptom of a larger problem. Probe into what caused this issue to happen. For example:

- Try asking “*what conditions had to exist for this to occur*”. Determine if the issue is specific to one process, or one department, or one individual? Can the issue be quantified?
- Ask “*why was there no calibration sticker on the gauge?*”
- Were there other Gauges with similar issues? How many pieces of M&TE did not have a sticker compared to how many did have a sticker?
- Did the sticker fall off due to weather or the working environment of a particular department?
- Was it the shape and material of the gauge itself; did similar gauges have the same issue; have historical audits identified similar issues; how often do these stickers fall off?
- How much money is the facility spending on stickers each year; how much time is lost on applying calibration stickers?

Bounding an issue will not only aid the auditors in determining isolated vs. systemic issues, but bounding the issue will also provide added clarity and insight when writing the finding on the audit report.

Going back to the M&TE example above, if the internal audit report lists “*Gauge XYZ as not having its calibration status identified*”, this provides Management no insight into the issue. Facility Management may view this as being nitpicky and not worth noting which leads to a negative perception of the auditor and audit process. Upper Management has no insight into the level of severity which could lead to the improper usage of resources in addressing the issue.

Perhaps the Internal Auditor could have determined if a systemic issue with the M&TE Process did or did not exist. Even if the auditor had dug into this issue and determined that out of the 200 gauges the facility had on hand, Gauge XYZ was the only gauge with its calibration status not identified, the auditor missed an opportunity to highlight an effective M&TE Process. The report could have stated that 199 out of 200 gauges had their calibration status identified correctly and the process appears to be 99.5% effective. Writing the report this way provides quantitative data that the process is effective, it shows that Facility Management is properly maintaining that process and provides Upper Management confirmation that resources do not need to be shifted towards correcting the process.

When an issue is identified during an audit, dig into the issue and the process that created the issue to determine what conditions existed to allow the issue to occur. Determine if the issue is systemic or isolated by bounding the issue. Identifying systemic issues will lead process changes that eliminate similar types of issues from reoccurring. When writing audit reports, be specific and use data from the audit, determine the bounding to provide insight for mid and senior management personnel so that they can facilitate change and dedicate resources.



Have an Idea for an Article?

Please submit your drafts to Donna Jacobi at djacobi@amstedrail.com or Gary Alderson at alderson@alltranstek.com.

Interested in Joining RSI QAC?

Contact Lee Verhey at verhey@rsiweb.org.



Not Getting the Newsletter and Want to Subscribe?

Contact Lee Verhey at verhey@rsiweb.org.

S-910 AND RETIREMENT OF SECTION L, MARKING OF FREIGHT CARS

Submitted by Lee Verhey – RSI

In January of 2020, the AAR issued Circular Letter C-13595 advising the industry of a complete rewrite of Section L and implementation of Standard S-910. With the relocation of S-910 into Section C of the Manuals of Standards & Recommended Practices (MSRP), Section L is being retired.

This was reinforced in August of 2020 when the AAR issued Circular Letter C-13630 to notify the industry of revisions to MSRP Section C, CAR CONSTRUCTION FUNDAMENTALS AND DETAILS, and Section L, LETTERING AND MARKING OF CARS. The main purpose of the circular letter was to retire Section L as indicated in the January circular letter. The AAR Equipment Engineering Committee (EEC) determined the content of Section L did not justify an entire MSRP section. Additionally, three publications were relocated from Section L to Section C, to be inserted in their alphabetical/numeric sequence location: M-947 - Adhesive-Backed Films for Marking Cars - Performance-Based Requirements, S-910 - Marking of Freight Cars, and S-916 - Retroreflective Comparator Panel Requirements

S-910 – Marking of Freight Cars sets forth the requirements for marking new freight cars and for when marks are required to be applied under this standard per the Field Manual of the AAR Interchange Rules, Rule 88.B, “From Owner.” The revision of Standard S-910 now includes the requirements of Standards S-912, S-914, and S-915. The 2020 revision was effective upon release and **becomes mandatory on July 1, 2021.**

Historically, plate dimensions were required to be marked on cars and the requirements are listed in S-913. The AAR has determined that because the dimensions must be placed into UMLER, there is no need to have the plate dimensions stenciled on cars. Hence, the plate requirements were not included in S-910. AAR plans to retire standard S-913 in the coming months.

Several questions regarding the S-910 standard were received by RSI to the AAR. Some of the questions and answers are as follows:

- Q.** Character Color – 1.5.4 of the Standard says – “against a contrasting background.” Section 3.4 says – “characters shall be either black on a white background or white on black” – Does that only apply to the 7” marks?
 - A.** Yes. Otherwise, for the larger reporting marks, the car color can serve as the background. The background must be white or black only for the 7” mark. This 7” reduced mark has an increased background to make the mark stand out, (as shown in detail A of the flatcar).
- Q.** A lot of customers match the car with the background - green, red, blue, aqua, yellow etc. – is this allowed or not?
 - A.** Yes, this is allowed for the 9” and 11” reporting marks as long as it is contrasting to the reporting marks.
- Q.** There is some confusion regarding the reference to 12” characters – what are the two extra characters for?
 - A.** AAR requires that room be left to the right of the reporting mark to allow special FRA characters to be added for future use and special situations. See CFR 49, 215.303, 305.
- Q.** Section 3.4 – Many customers have used a 12” character for the sides of the car - is this no longer allowed?
 - A.** The 11-inch mark has been determined to be sufficiently large. AAR has indicated they prefer that the standard be followed in this regard. The goal is simplification, a reduction in the number of sizes repair facilities need to inventory.

- Q.** Several car owners seem to think that the letters must be cut and put on the background individually –that the backing cannot be one piece – each letter must be by itself.
- A.** Decals can consist of individual characters, or they can include letters integrated into a single decal that includes the background. The decal set can have a front mask and a back mask to facilitate the application to the car.

As indicated in the Circular Letter C-13630, S-910 became effective upon release of the circular on August 6, 2020 and compliance is mandatory July 1, 2021. If you have questions regarding the standard, please contact Lee Verhey at verhey@rsiweb.org.

AAR AUDITOR CONFERENCE – REGISTRATION IS NOW OPEN

Submitted by Michael Ruby – TrinityRail

The 33rd Annual AAR Quality Assurance Auditor and Industry Conference has been rescheduled for May 11-12. Registration is required to attend this [Online Webinar](#).

- Topics will include:
 - Keynote Address
 - FRA Update
 - Rail Supply Institute Update
 - AAR Technical Committees Update
 - Section J 2021 Revision
 - Auditing Electronic Documents
 - Remote Auditing Plan
 - Health of the M-1003 Program
 - QA Committee Q&A Session
 - Audit Findings & Best Practices
 - QAPE & Objective Evidence
 - 7.1 Nonconformance Data
 - *Workshops are not planned for this year's event*
- Conference Cost: \$570
- To Register: [AAR-QA-2021 Quality Assurance Conference Webinar](#)

The information given in this newsletter is for informational and educational purposes only. It is not intended to provide legal advice and should not be relied upon to make business decisions about any existing, future or prior rule, regulation or interpretation.

USEFUL LINKS

[Railway Supply Institute](#)

[RSI QAC & Previous Newsletters](#)

[RSI Tank Car Resource Center](#)

[Registry of M-1003 Certified Companies](#)

[M-1003 Frequently Asked Questions](#)

[American Society for Quality - Training](#)

[RSI 100](#)

[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 \(Chapter 7\)](#)

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