Association of American Railroads

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AND

RECOMMENDED PRACTICES
SECTION J

SPECIFICATION FOR QUALITY ASSURANCE

SPECIFICATION M-1003

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TO THE USER

Section J—Specification for Quality Assurance, *Manual of Standards and Recommended Practices* of the Association of American Railroads, is Specification M-1003, and it is issued under the authority of the AAR Mechanical Committee. This specification applies to materials, products, and/or services (*activity*) for use in the North American Railway Interchange Service. The objective of this specification is to describe the *Quality Assurance Program (QAP)* requirements that must be met for AAR *certification*. This is accomplished through evaluation by an AAR *audit agency* of the effective implementation of the *facility's* QAP.

There are seven chapters:

- Chapter 1. Introduction
- Chapter 2. Quality Assurance Program Requirements
- Chapter 3. Administrative Provisions
- Chapter 4. Reserved
- Chapter 5. *Commonly Used Hyperlinks For Section J Quality Assurance Program*
- Chapter 6. Quality Assurance Committee
- Chapter 7. Quality Assurance Nonconformance Reporting

USER'S GUIDE

Section J contains one specification. It consists of the following:

- **Preface:** A listing of the subjects covered in the individual volumes making up this manual. This Preface is part of each section.
- **Table of Contents:** Identification of the seven chapters in numerical sequence.
- **Specification M-1003:** The body of this volume is a single specification setting forth mandatory requirements for a *facility's* QAP.

RESPONSIBILITY

The coverage of Section J, Specification for Quality Assurance, is the responsibility of the AAR *Quality Assurance Committee (QAC)*.

PREFACE

The *Manual of Standards and Recommended Practices* is issued by authority of the Association of American Railroads Safety and Operations Department and includes all adopted specifications, standards, and recommended practices of the Association of American Railroads.

The manual is composed of the following sections:

- Section AS—Administrative Standards Supplement serves as a supplement to all *MSRP* sections (this is available as a free download at https://aarpublications.com/msrp.html)
- Section A-I—Table of Contents, Alphabetical and Numerical Index of Sections B through T-III inclusive (this is available as a free download at https://aarpublications.com/msrp.html)
- Section B—Freight Car Draft Components (100 Series)
- Section C (C-I)—Car Construction Fundamentals and Details (200 and 2000 Series)
- Section C-II—Design, Fabrication, and Construction of Freight Cars, M-1002
- Section C-III—Specifications for Tank Cars, M-1003
- Section D—Trucks and Truck Details (300 and 3000 Series)
- Section E (E-I)—Brakes and Brake Equipment (300, 400, 3000, and 4000 Series)
- Section E-II—Electronically Controlled Brake Systems (4200 Series)
- Section F—Sensors
- Section G (G-I)—Wheels and Axles (600 Series)
- Section G-II—Wheel and Axle [Shop] Manual (600 and 700 Series)
- Section H (H-I)—Journal Bearings and Lubrication (700 Series)
- Section H-II—Roller Bearing [Shop] Manual (700 Series)
- Section I—Intermodal Equipment Manual
- Section J—Specification for Quality Assurance, M-1003
- Section K-I—Railway Electronics Systems Architecture and Concepts of Operation (9000 Series)
- Section K-II—Locomotive Electronics and Train Consist System Architecture (9100 Series)
- Section K-III—Wayside Electronics and Mobile Worker Communications Architecture (9200 Series)
- Section K-IV—Office Architecture and Railroad Electronics Messaging (9300 Series)
- Section K-V—Electronics Environmental Requirements and System Management (9400 Series)
- Section K-VI—Railway Data Management and Communications (9500 Series)
- Section M—Locomotives and Locomotive Interchange Equipment (500 and 5000 Series)
- Section N—Multi-Level Manual (800 Series)
- Section S (S-I)—Casting Details
- Section S-II—Truck Details and Casting Codes (300 and 3000 Series)
- Section S-III—Coupler and Yoke Details (100 Series)
- Section T-I—Interoperable Fuel Tenders for Locomotives, M-1004
- Section T-II—Interoperable Battery Tenders for Locomotives, M-1005
- Section T-III—Interchange Standards for Fuel Tender Components

Specifications are designated with an “M” prefix (e.g., M-900). Standards are prefixed “S” (e.g., S-900). Recommended Practices carry the prefix “RP” (e.g., RP-900).

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CHAPTER 1. INTRODUCTION

1.1 Scope

1.1.1 The provisions of this specification are mandatory when referenced in the *Field Manual of the AAR Interchange Rules*, AAR circular letters, or as listed in Appendix A.

1.1.2 For those *activities* not listed in Appendix A, facilities may be *certified* under the M-1003 *Quality Assurance Program (QAP)* on a voluntary basis.

1.1.3 This specification establishes the following:

- Introduction
- QAP Requirements
- Administrative Provisions
- Recommended Practice for Internal Quality Auditing
- *Quality Assurance Committee (QAC)* Responsibility
- Quality Assurance *Nonconformance* Reporting

1.2 Objective

The objective of this specification is to describe the QAP requirements that must be met for *facility certification* by the AAR. An AAR *audit agency* evaluates the effective implementation of the *facility's* QAP and integration of the *facility's activity codes*.

1.3 Definitions and Abbreviations

AAR Authorized Representative	AAR—staff, committee members, agents, and *accredited auditors*.
Accredited Auditor	An individual who has been *certified* by the *Quality Assurance Committee* and is authorized to conduct an *audit* on behalf of the AAR.
Activity	Material, product, or service for use in North American Railway Interchange Service.
Activity Code	The unique identifier associated with each *activity*.
Annually	When used in Chapter 2 of this specification means 365 days.
Audit	A documented evaluation process aimed at verifying by examination that the applicable elements of the QAP have been established, documented, and effectively implemented in accordance with specified requirements.
Audit Agency	An organization of *accredited auditors*.
Adverse Audit Finding	A *noncompliance* identified during an *audit*.
Audit Team	Authorized representatives conducting an *audit* under the direction of a lead auditor.
Auditee	The *facility* being audited.
Calibrate (Calibration)	Comparison and adjustment, if required, of measuring and test equipment to a known standard to determine and ensure accuracy.
Certification (Certified)	The formal act by the AAR of confirming that a *facility* has met the requirements of the AAR Quality Assurance Specification and any required *technical approval*.
Certification Audit	A type of *audit* that encompasses all 24 elements of the AAR QAP.
Change Management	Systematically planning, implementing, and controlling changes to ensure quality, compliance, and performance while minimizing risks.
Characteristic	A unique attribute essential/critical to quality.

Compliance	The state of meeting specified requirements, whether in the applicable standards, specifications, recommended practices, rules, codes, statutes, regulations, and contractual requirements.
Compliance Audit	A type of *audit* that focuses on selected elements of the AAR QAP.
Corrective Action	Steps taken to eliminate the root cause and prevent recurrence of a *nonconformance.*
Customer-Supplied Materials	Items provided by the customer to be incorporated into the final product.
Facility	A fixed geographical location established to perform an *activity* in accordance with this specification.
Initiator	The entity that identifies and reports a *nonconformance* in accordance with Chapter 7 of this specification.
Internal Audit	A type of *audit* performed by the *facility* to verify *compliance* and effective implementation of its QAP.
Item of Concern	A type of *adverse audit finding* that identifies a potential *noncompliance* within the *facility's* QAP.
Noncompliance	An *adverse audit finding* in which the *facility's* QAP does not meet specified requirements.
Nonconformance	An *activity* that does not meet the applicable standards, specifications, recommended practices, rules, codes, regulations, and/or contractual requirements.
Positive Recall	An authorized postponement of the *facility's* inspection and test plan that allows a *facility* to trace an *activity* within the process through an approved procedure.
Preventive Action	Proactive measure taken to identify, analyze, and eliminate potential causes of conditions adverse to quality before they occur.
QAC	The AAR Quality Assurance Committee
QAM	The AAR *Quality Assurance Program* Management
QA Code	The unique identifier assigned by the AAR to each *facility*.
Quality Assurance Program (QAP)	A program established and maintained by the *facility* for the purposes of meeting the 24 elements specified in Chapter 2, and Chapter 7.
Quality Assurance Program Evaluation (QAPE) Checklist	A document used by the *facility* to identify the corresponding line item from the *facility's* quality assurance manual and procedures that address each element requirement in Chapter 2 of this specification.
Quality Metrics	Quantifiable measures used to evaluate performance against intended results.
Recertification Audit	A type of *audit* that encompasses all 24 elements of the AAR Quality Assurance Program for currently *certified* facilities.
Risk Management	A systematic approach implemented as part of the QAP that involves assessment, evaluation, control, and communication of risks related to product quality, manufacturing processes, and/or customer safety/satisfaction.
Special Processes	A type of process in which *characteristics* of the resulting output cannot be fully or practically verified while in process, thus necessitating a process controlled by qualified personnel, approved procedures, and controlled equipment (including, but not limited to, welding, heat treating, plating, coating, lining, nondestructive testing, and pressure treating).
Subcontractor	An entity used by a *facility* for the purpose of supporting its *activity*.
Technical Approval	Unless otherwise specified in this specification, this means approval by the AAR technical committee with authority for the *activity*.
Verification	Confirmation that an *activity*, condition, or control conforms to the requirements.

CHAPTER 2. QUALITY ASSURANCE PROGRAM REQUIREMENTS

2.1 Objective of Quality Assurance Program (QAP)

2.1.1 The *Quality Assurance Program* (*QAP*) must be established and maintained by the *facility* for the purpose of ensuring that the *activities* conform with all applicable standards, specifications, rules, codes, statutes, regulations, contractual requirements, and adopted recommended practices. At a minimum, the *facility's* QAP must include the 24 required elements specified in this chapter.

2.1.2 The principal objectives of a QAP shall:

2.1.2.1 Fulfill the specified requirements outlined in elements 2.1 through 2.24.

2.1.2.2 Provide for prevention, early detection, and disposition of *nonconformances*.

2.1.2.3 Strive for continuous improvement of *activities* and the processes producing them.

2.1.2.4 Document the processes and *characteristics* affecting quality in *activities* covered by this specification in order to verify that *activities* meet contractual, statutory, and regulatory requirements.

2.2 Scope and Applicability

2.2.1 The *facility* shall identify and document the scope of the QAP.

2.2.2 The *facility's* QAP shall apply to all aspects of the applicable activities that are listed in Appendix A.

2.3 Quality Assurance Program and Manual Requirements

2.3.1 The *facility* shall

2.3.1.1 Establish, implement, and maintain a QAP, documented in a Quality Assurance Manual and supporting procedures, according to the requirements of this specification.

2.3.1.2 Document the purpose, scope, and plan of execution in a manner sufficient to ensure consistent understanding and implementation for each QAP function in elements 2.6 through 2.24.

2.3.1.3 Maintain a current subscription to AAR Circular Letters or have authorized access to current AAR Circular Letter information as it pertains to the *facility's* operations.

2.3.1.4 Have authorized access to the latest version of AAR Specification M-1003.

2.3.2 The QAP manual shall:

2.3.2.1 Include a description of the organization.

2.3.2.2 Include 24 elements in this chapter, including purpose and scope for elements 2.6 through 2.24.

2.3.2.3 Include or reference the QAP procedures and applicable supporting documents for effective implementation of the QAP.

2.3.2.4 Outline the hierarchy of the documentation used in the QAP to plan and perform the work.

2.3.2.5 Provide the means for effectively implementing and continuously improving the quality program.

2.3.2.6 Include or reference a *facility's* production, inspection, and test plan (see element 2.5). The production, inspection, and test plan shall describe the *facility's* overall process and is not required to include each activity or product line.

2.3.2.7 Undergo an annual review.

2.3.2.8 Be approved by senior management, and the approval shall be documented.

2.4 Leadership and Management Responsibility

2.4.1 Management shall demonstrate leadership, accountability, and commitment to the QAP by:

2.4.1.1 Appointing a representative who has the responsibility and authority to implement, maintain and communicate the quality policy.

2.4.1.2 Ensuring that the quality policy and objectives are established.

2.4.1.3 Ensuring the integration of the QAP requirements into the *facility's* processes that affect quality.

2.4.1.4 Ensuring that quality requirements are not subordinate to production.

2.4.1.5 Defining and assigning the responsibility and authority of personnel who manage, perform, and verify work affecting quality.

2.4.1.6 Controlling nonconforming *activities*.

2.4.1.7 Ensuring adequate resources are available to support continuous improvement.

2.4.2 Policy and Objectives

The quality policy shall:

2.4.2.1 Align with and support the strategic direction of the QAP.

2.4.2.2 Have a commitment to continual improvement of the QAP.

2.4.3 Roles, Responsibilities, and Authorities

Management shall assign the responsibility and authority for:

2.4.3.1 Ensuring customer focus.

2.4.3.2 Ensuring that the QAP achieves its intended results.

2.4.3.3 Ensuring changes to the QAP are implemented effectively.

2.4.4 Management Review

Management shall review the *facility's* QAP *annually* to ensure its continuing suitability, adequacy, effectiveness, and alignment with the strategic direction of the QAP.

2.4.4.1 The management review shall include but is not limited to the following:

2.4.4.1.1 The status of actions from previous management reviews.

2.4.4.1.2 Changes in external and internal factors that are relevant to the QAP.

2.4.4.1.3 Information on the performance and effectiveness of the QAP, including trends in the following:

2.4.4.1.3.1 Internal and external quality *audits*.

2.4.4.1.3.2 Internal and external *nonconformances* including Chapter 7 requirements.

2.4.4.1.3.3 *Corrective* and *preventive actions*.

2.4.4.1.3.4 Performance indicators, for example, inspection results, scrap rates, etc.

2.4.4.2 The management review should also include the following:

2.4.4.2.1 The status of continual improvement initiative(s).

2.4.4.2.2 The status of any risk analyses.

2.4.4.3 Maintain records of such reviews.

2.5 Production, Inspection, and Test Planning

2.5.1 The *facility* shall:

2.5.1.1 Plan the requirements for production.

2.5.1.2 Plan the requirements for inspection and testing.

2.5.1.3 Develop and maintain an inspection and test plan.

2.5.2 The inspection and test plan may be of any format to suit the *facility's* QAP. This includes flow charts, as long as all criteria from incoming inspection (element 2.10) through packaging and shipping (element 2.16) are addressed. It shall, however, do at least the following:

2.5.2.1 Indicate each inspection and test point and its relative location in the processing cycle, including incoming inspection, preservation of items, packaging, and site inspection and testing. The *facility* may include additional in-process inspection points for its own evaluation of quality.

2.5.2.2 Identify or make reference to the *characteristics* to be inspected, examined, and tested at each point and specify acceptance criteria to be used. The production, inspection and test plan is not required to list every potential document used.

2.5.2.3 Identify inspection and test points where measurement and test records are maintained so that assessments required by paragraph 2.8.6 can be met.

2.5.2.4 Indicate mandatory hold points that require *verification* of selected *characteristics* necessary for the work to proceed.

2.5.2.5 Define or refer to sampling plans and statistical process control, including the criteria for selection, if proposed, and indicate where they will be used.

2.5.2.6 Define or refer to how *verification* of *compliance* to process procedures will be accomplished and documented.

2.5.2.7 When required, specify where lots or batches will be used.

2.5.2.8 Indicate where *subcontractor* services will be employed.

2.6 Corrective and Preventive Actions

2.6.1 The *facility* shall include in their corrective action procedure the following five steps with documented assignment of responsibility and completion dates:

2.6.1.1 Problem Identification: Identify the nature and extent of the *noncompliance*, customer complaint, or *nonconformance*.

2.6.1.2 Containment: Determine the immediate actions necessary to control the condition and prevent further impact. Note: This is not the *corrective action*.

2.6.1.3 Root Cause: Determine the root cause(s) of the *noncompliance*, customer complaint, or *nonconformance* using problem-solving tools, methods, and techniques.

2.6.1.4 Corrective Action: Establish and implement *corrective action(s)* needed to eliminate the identified root cause(s) to prevent recurrence.

2.6.1.5 Follow Up: Establish and implement follow-up plan(s) to verify effectiveness of the *corrective action*.

2.6.2 The *facility*'s *preventive action* procedure shall include the following:

2.6.2.1 Use of appropriate sources of information, such as process operations, that affect product quality, concessions, audit results, quality records, service reports, and customer feedback to detect, analyze, and eliminate causes of potential *nonconformance* or *noncompliance*.

2.6.2.2 Methods used to ensure that the *preventive action* is effective.

2.6.3 The facility shall maintain records of *corrective* and *preventive actions*.

2.7 Document Control

2.7.1 The *facility* shall:

2.7.1.1 Include in their procedure the control of all documents affecting quality, including documents of external origin such as standards and customer drawings.

2.7.1.1.1 Applicable versions of documents must be accessible to the relevant personnel where the absence of such documents could adversely affect quality.

2.7.1.1.2 All applicable documents affecting quality must be maintained in English, at a minimum.

2.7.1.1.3 Invalid and/or obsolete documents are promptly removed from all points of issue or use or otherwise assured against unintended use.

2.7.1.1.4 Any obsolete documents retained for legal and/or reference purposes shall be suitably identified and assured against unintended use.

2.7.1.2 Complete and maintain the *Quality Assurance Program Evaluation (QAPE) Checklist* identifying the corresponding line item from the *facility's* Quality Assurance Manual and/or procedures that address each requirement in the current Specification M-1003.

2.7.1.3 Establish a method to identify the current revision status of documents that affect quality.

2.7.2 Authorized personnel shall review documents and approve them for adequacy prior to use.

2.7.3 When changes are made to documents, the *facility* shall:

2.7.3.1 Ensure that changes to documents are approved by authorized personnel.

2.7.3.2 Ensure that the changes are processed promptly at all specified locations.

2.7.3.3 Maintain a record of changes.

2.7.4 Written notes on documents are acceptable provided they are made by authorized persons according to established procedures.

2.7.5 The *facility* shall revise and reissue documents in accordance with established procedures.

2.8 Measuring and Testing Equipment

2.8.1 The *facility*'s procedure shall address the control, calibration/verification, and maintenance of all measuring and testing equipment and devices used to validate and/or verify conformity.

2.8.2 At prescribed intervals or prior to use, verify or calibrate measuring and testing equipment utilizing certified equipment having a known valid relationship to nationally recognized standards.

2.8.3 Where no national standard exists, document the basis employed for *calibration*. This can include industry or user standards.

2.8.4 Maintain *calibration* records that include the following:

2.8.4.1 Date of the *calibration*.

2.8.4.2 Reference to standard applied.

2.8.4.3 Equipment type.

2.8.4.4 Unique identification number.

2.8.4.5 Location.

2.8.4.6 Frequency of checks. (Note: *Calibration* intervals can be dependent upon the severity of the environment in which the devices are stored and/or the criticality of the measurements being taken. A track record should be developed over the course of time.)

2.8.4.7 Description of check method.

2.8.4.8 Acceptance criteria.

2.8.4.9 Action to take when results are unsatisfactory.

2.8.5 Identify measuring and testing equipment with a tag, sticker, or other suitable indicator to show the unique identification and *calibration* status.

2.8.5.1 The user of the measuring and testing equipment must be aware of its *calibration* status.

2.8.6 Assess and document the validity of previous inspection and test results when measuring and testing equipment and process monitoring equipment are found to be out of *calibration*.

2.8.7 Ensure that environmental conditions are suitable for *calibrations* being carried out.

2.8.8 Ensure that the handling, storage, shelf life, and preservation of measuring and testing equipment is such that the accuracy and fitness for use are maintained.

2.8.9 Safeguard all measuring and testing equipment from adjustments that would invalidate the *calibration* setting. (Note: This can be in the form of a seal or a physical means to identify tampering, or password protection, or physical barriers to access points of adjustment.)

2.9 Purchasing/Subcontracting

2.9.1 The *facility* shall:

2.9.1.1 Identify products/services to be purchased or subcontracted.

2.9.1.2 Determine for those subcontracted and purchased products/services 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*.

2.9.1.3 Evaluate and select *subcontractors* based on documented assessments of their ability to meet contract and quality requirements.

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.

2.9.1.5 Maintain quality records of acceptable *subcontractors*.

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.

2.9.3 The *facility* shall review and approve purchasing documents for adequacy of the specified requirements prior to release.

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.

2.10 Incoming Inspection

2.10.1 The *facility* shall:

2.10.1.1 Inspect, test, and identify incoming items as required by the inspection and test plans.

2.10.1.2 Check the evidence provided by *subcontractors* and suppliers as a means of verifying quality per the requirements of paragraph 2.10.1.1.

2.10.1.3 Hold incoming items until the required inspection and tests are completed or the necessary inspection and test reports are received and verified (except when items are released under *positive recall*).

2.11 In-Process Inspection

2.11.1 The *facility* shall:

2.11.1.1 Inspect and test *activities* as required by the inspection and test plan.

2.11.1.2 Verify the *characteristics* of the *activity*.

2.11.1.3 Hold items and/or *activities* until validation of acceptable *characteristics* has been completed successfully (except when items are released under *positive recall*).

2.11.1.4 Identify nonconforming items and/or *activities*.

2.12 Final Inspection

2.12.1 The *facility* shall:

2.12.1.1 Inspect and test *activities* as required by the inspection and test plan.

2.12.1.2 Verify the *characteristics* of the *activity.*

2.12.1.3 Hold items and/or *activities* until validation of acceptable *characteristics* has been completed successfully.

2.12.1.4 Identify nonconforming items and/or *activities*.

2.12.1.5 Review all inspection and test records and verify that the *activity* has been inspected at all points shown in the inspection and test plan.

2.12.1.6 Retain all inspection records as required.

2.13 Inspection Status

2.13.1 The *facility* shall:

2.13.1.1 Provide means for ensuring that required inspections and tests are performed and that the acceptability of the *activity* with regard to inspections and tests performed is known throughout processing.

2.13.1.2 Establish and maintain a system (electronic, tags, stamped impressions or other means) that:

2.13.1.2.1 Provides controls for acceptance status, including the authority for changing inspection status of the *activity.*

2.13.1.2.2 Shows the identity of the *facility* and its inspector of any inspection stamps used.

2.13.1.2.3 Indicates final acceptance for the *activity* and/or on its packaging. Final acceptance indicators, in-process indicators, and incoming inspection indicators must not be identical.

2.14 Identification and Traceability

2.14.1 The *facility* shall:

2.14.2 Establish and maintain systems, where appropriate, that identify each item (lot, component, or part) to the applicable drawing, specification, or other technical document, from receipt through processing and shipping.

2.14.3 Where traceability is specified, establish and maintain systems that provide a unique identification assigned to each *activity* that shall distinguish those *activities* that are otherwise identical but that have been processed in separate batches. The *facility* shall record this identification on all process, inspection, and test records.

2.15 Process Control

2.15.1 The *facility* shall identify and plan the processes that directly affect quality and ensure that the processes are conducted under controlled conditions. Controlled conditions shall include but not be limited to the following:

2.15.1.1 Adhering to documented procedures defining the work process where the absence of such procedures could adversely affect quality.

2.15.1.2 Employing suitable process equipment in a suitable working environment.

2.15.1.3 Complying with applicable codes, standards, specifications, documented procedures, and/or inspection and test plans (element 2.5).

2.15.1.4 Monitoring and controlling applicable process parameters and product *characteristics*.

2.15.1.5 Approving procedures, processes, and equipment.

2.15.1.6 Establishing workmanship criteria in the clearest appropriate manner (e.g., written standards, reference standards, pictures, etc.).

2.15.1.7 Identifying and maintaining equipment with documented preventive maintenance to ensure continuing conformity to specified requirements.

2.15.1.8 Ensuring that *special processes* are performed in accordance with applicable codes, standards, specifications, and governmental and contractual requirements by qualified personnel using qualified equipment and procedures.

2.15.1.9 Ensuring that the qualification of personnel, procedures, and equipment complies with specified requirements.

2.15.1.10 Ensuring that documentation for currently qualified personnel, processes, or equipment is maintained in accordance with specified requirements.

2.15.1.11 Defining those *special processes* not covered by applicable codes, standards, or specifications. Where quality requirements for a given *activity* exceed that of established codes, standards, and specifications, the *facility* shall describe the necessary qualifications of personnel, procedures, and equipment.

2.15.1.12 Ensuring that any required AAR or other technical requirements have been obtained and understood and are maintained. This includes *verification* that the requirements of applicable AAR standards, specifications, adopted recommended practices, or other technical requirements are being met.

2.16 Preservation, Packaging, and Shipping

2.16.1 The *facility*'s procedure shall include:

2.16.1.1 Handling, storage, preservation, and delivery of *activities* including *customer-supplied materials*.

2.16.1.2 Preventing damage of stored materials.

2.16.1.3 Ensuring conformance to specified material requirements, including control of dated materials, environmental factors, and technical requirements.

2.16.2 The *facility* shall arrange for the protection of *activities* after final inspection and test.

2.17 Quality Records

2.17.1 The *facility* shall maintain quality records as evidence that:

2.17.1.1 The *activities* meet applicable codes, standards, specifications, and governmental and contractual requirements.

2.17.1.2 Personnel, procedures, and equipment for *special processes* are qualified as required by paragraph 2.15.1.10.

2.17.1.3 Selection and surveillance of *subcontractors* are met as required by paragraph 2.9.1.

2.17.2 The *facility* shall include inspection and test records that identify the following:

2.17.2.1 Either the reference drawing number and revision number or part number of the *activity*.

2.17.2.2 Applicable requirements.

2.17.2.3 Specific inspections performed and results obtained. If measurements are not required, the *facility* shall include the basis of acceptance.

2.17.2.4 *Nonconformance* reports (see paragraph 2.18.2.3).

2.17.2.5 The date of inspection or test.

2.17.2.6 The identity of the inspector or data recorder.

2.17.3 The *facility* shall:

2.17.3.1 Make quality records available for analysis and review.

2.17.3.2 Identify, index, and file quality records.

2.17.3.3 Retain quality records in accordance with applicable contractual, legal, and/or technical specification requirements.

2.17.3.4 Provide an environment suitable for minimizing and preventing the deterioration, damage, and loss of physical records. If electronic records are utilized, the *facility* shall address prevention of data loss, data recovery, and storage requirements.

2.18 Nonconformance Control

2.18.1 To control nonconforming *activities*, the *facility*'s procedure shall:

2.18.1.1 Define the responsibility and authority of those who determine final disposition of nonconforming *activities*.

2.18.1.2 Detect and record *nonconformance*.

2.18.1.3 Identify and hold nonconforming *activities* for evaluation.

2.18.1.4 Develop a disposition that has the concurrence of all responsible parties.

2.18.1.5 Implement the accepted disposition.

2.18.1.6 Provide requirements for the reinspection and test of repaired and reworked *activities*.

2.18.1.7 Advise the *initiator* and the AAR through the online AAR material *nonconformance* reporting website at http://aar.iirx.net of the final disposition of returned/recalled *activities* identified as nonconforming to preclude unauthorized use, as per Chapter 7.

2.18.2 The *facility* shall:

2.18.2.1 Designate a Chapter 7 *nonconformance* reporting contact.

2.18.2.2 Provide holding areas or methods for physically segregating nonconforming *activities* to prevent unauthorized use, shipment, or mixing with conforming *activities*. However, where physical segregation is not practical, tagging, marking, or other positive means of identification is acceptable.

2.18.2.3 Maintain records identifying nonconforming *activities*, the nature and extent of *nonconformance*, its disposition, and evidence that repaired and reworked *activities* have been inspected or tested in accordance with applicable documented procedures.

2.18.2.4 Record and report to the customer any *customer-supplied materials* that are lost, damaged, nonconforming, or otherwise unsuitable for use.

2.19 Change Management, Risk Management, and Continual Improvement

2.19.1 The *facility*'s procedure(s) shall address *change management*, *risk management*, and continual improvement.

2.19.2 *Change management* processes should consider the following (as applicable):

2.19.2.1 Where opportunities for change come from and how are opportunities for change identified.

2.19.2.2 An assessment of the change considering risks and opportunities.

2.19.2.3 How implementation of opportunities for change are planned.

2.19.2.4 Assigning roles and responsibilities for implementation.

2.19.2.5 Follow-up plans for verification of the effectiveness of the change

2.19.3 *Risk management* should utilize risk analysis methods to identify and potentially mitigate quality issues.

2.19.4 Continual improvement of *activities* and the processes producing them should include (but is not limited to) *change management*, *risk management*, corrective action, preventive action, internal audit results, and actions resulting from management reviews.

2.19.4.1 *Quality metrics* should be utilized to demonstrate continual improvement.

2.19.5 Records shall be maintained in support of procedure(s).

2.20 Statistical Methods

2.20.1 The *facility* shall:

2.20.1.1 Maintain procedure(s) to implement, analyze, and control the use of statistical methods.

2.20.1.2 Determine the applicable use of statistical methods and identify where used.

2.20.1.3 Use statistical methods to evaluate and control the variability of processes and key quality *characteristics*.

2.21 Internal Quality Audits

2.21.1 The *facility* shall:

2.21.1.1 Conduct *internal audits*, per procedure(s), to verify *compliance* and effective implementation of its QAP.

2.21.1.2 Schedule and conduct *annual internal audits* that include a review of all 24 elements contained in Chapter 2 of this specification by trained and qualified personnel.

2.21.1.3 Utilize, at a minimum, the QAPE checklist.

2.21.2 *Internal audit* results shall be documented and include evidence of conformance and/or *nonconformance* of *activities* to specified requirements.

2.21.3 The management personnel responsible for the areas with noted *nonconformances* shall take timely *corrective action*.

2.21.4 Follow-up actions shall verify and record the implementation and effectiveness of the action taken.

2.22 Training

2.22.1 The *facility* shall:

2.22.1.1 Maintain procedure(s) for identifying training needs, providing the training, and evaluating the effectiveness of that training for all personnel involved in *activities* affecting quality.

2.22.1.2 Create and maintain job descriptions for all processes affecting quality. Job responsibilities and qualification requirements must be defined.

2.22.1.3 Personnel involved in *special processes* must have both training and applicable work experience to be considered qualified.

2.22.1.4 Maintain training records for qualified personnel as long as they remain qualified or as specified.

2.22.1.5 Define the measures to ensure that personnel are aware and knowledgeable of their specific responsibilities for quality.

2.22.1.6 Provide the necessary instruction and means whereby those personnel can develop, achieve, and maintain proficiency.

2.23 Contract Review

2.23.1 The *facility* shall maintain procedure(s) for contract review such that, before submission of an offer by the *facility* or at the acceptance of a contract or order (statement of requirement), the offer, contract, or order shall be reviewed by the *facility* to ensure the following:

2.23.1.1 The requirements are adequately defined and documented. Where no written statement of requirement is available for an order received by verbal means, the *facility* shall ensure that the order requirements are agreed to before acceptance and subsequently documented.

2.23.1.2 Any differences between the contract or accepted order requirements and those in the offer are resolved.

2.23.1.3 The *facility* has the capability to meet the contract or accepted order requirements.

2.23.2 When servicing is specified in the contract or order, the *facility* shall establish and maintain documented procedures for performing, verifying, and reporting that the servicing meets the specified requirements.

2.23.3 The *facility* shall identify how change(s) to a contract is/are made and correctly transferred to the responsible personnel.

2.23.4 The *facility* shall maintain records of contract reviews.

2.24 Design Control

2.24.1 Where product design and redesign are not performed at the facility, they must address how OEM specifications, regulatory rules, and/or customer requirements are controlled.

2.24.2 Where product design and redesign are performed at the *facility*, they shall maintain procedure(s) to plan, control, and verify the documented design intent to ensure that the specified requirements are met.

2.24.2.1 The *facility* must determine and record the applicable design inputs for the activity. When determining the inputs for the design, the *facility* must include the following items (but not limited to):

2.24.2.1.1 The level of detail necessary to permit the design activities to be carried out on a consistent basis to assure design decision(s), accomplish design verification measures and evaluate design changes are completed in a controlled manner.

2.24.2.1.2 The responsible design individuals, groups, and/or organizations that are required for approval at various stages of the design process.

2.24.2.1.3 Statutory and Regulatory Requirements

2.24.2.1.4 Functional and Performance Requirements

2.24.2.1.5 Customer Requirements

2.24.2.1.6 Information derived from previous similar designs

2.24.2.2 Design and development shall:

2.24.2.2.1 Be performed by authorized personnel that are not subordinate to manufacturing function.

2.24.2.2.2 Contain or refer to acceptance criteria.

2.24.2.2.3 Identify those characteristics of the design that are crucial to the safe and proper functioning of the product (e.g., operating, storage, handling, maintenance, and disposal requirements)

2.24.2.2.4 Provide appropriate information for purchasing, production and servicing provision.

2.24.2.3 The *facility* shall review design and development output documents before their release.

2.24.2.4 All design and development changes and modifications shall be identified, documented, reviewed, verified, and validated as appropriate and then approved by authorized personnel, including any required AAR approvals.

2.24.2.5 The *facility* shall:

2.24.2.5.1 Update the acceptance criteria and the characteristics of the design that are crucial to the safe and proper functioning of the product.

2.24.2.6 Maintain records of the review of changes and any necessary actions.

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CHAPTER 3. ADMINISTRATIVE PROVISIONS

3.1 Scope

This chapter outlines the administrative provisions for the application and maintenance of AAR *Quality Assurance Program (QAP) Certification*.

3.2 General

3.2.1 AAR M-1003 Application System

The AAR M-1003 Application System (the online system) for which *facility certification* is administered and managed resides within the AAR's Quality Assurance Resource Center. The URL to this system is http://aar.iirx.net.

3.2.2 Establishing and Managing a User Account

A user must request and establish an account with the AAR through the following link: https://aar.iirx.net/Account/AccountRequest.

3.2.3 AAR Access to the Facility

An *AAR authorized representative* shall have unrestricted access to the *facility* to evaluate their QAP.

3.2.4 Auditor Assignment

A *facility* will have the opportunity to question the AAR *Quality Assurance Program Manager (QAM)* for cause of the inclusion of any auditor. For the purposes of this paragraph, "cause of" is defined as any likelihood of bias or conflict of interest.

3.2.5 Audit Fees

Refer to the *Office Manual of the AAR Interchange Rules*, Appendix E, for the *audit* fee structure.

3.3 Initial Application Process

3.3.1 Application process is required for initial *certifications* only. Each applicant must apply for initial *certification* via the online system at http://aar.iirx.net. The applicant is responsible for completing the application as specified on the AAR Web site at https://aar.com/standards/m1003-application.html. The application status is provided in the online system.

3.3.1.1 For mandatory *activities*, refer to Appendix A of this specification.

3.3.1.2 For voluntary *activities*, refer to the user guide and provide a brief statement describing the scope of materials, products, or services and how and where it is used in North American Railway Interchange Service.

3.3.2 The following documentation shall accompany the application:

3.3.2.1 Quality Assurance Manual approved by senior management official.

3.3.2.2 Organization chart depicting Quality Assurance functions.

3.3.2.3 A completed *Quality Assurance Program Evaluation (QAPE) Checklist*, which can be found at https://aar.com/standards/FAQ.html. The *facility* must identify the corresponding line item from their quality manual and procedures that addresses each requirement in M-1003, Chapter 2.

3.3.2.4 Any current AAR *technical approvals*/certificates relating to the *activities* covered by this application.

3.3.2.5 The *facility* must provide proof of sales or pending sales for supplying *activities* to the North American Railway Interchange Service.

3.3.2.6 AAR staff reserves the right to request additional information from the applicant.

3.3.3 Following the review and acceptance of the application, the AAR *Quality Assurance Program Manager (QAM)* will assign the *QA Code* and the *audit agency*.

3.3.4 The *audit agency* will assign a lead auditor who is responsible for contacting the applicant and requesting a current copy of the Quality Assurance Manual and a completed QAPE Checklist prior to scheduling the *audit*.

3.3.4.1 The *facility* will be advised, with reasons, if the Quality Assurance Manual and/or the QAPE Checklist is not adequate. An *audit* will not be scheduled until the deficiencies or discrepancies have been resolved.

3.3.5 Following the review and acceptance of the Quality Assurance Manual and the completed QAPE Checklist, the lead auditor is responsible for contacting the applicant and scheduling the *facility audit*.

3.3.6 The *facility* may conditionally start work on the *activities* for which it has applied for *certification*; however, the *facility* shall not release any *activities* until the *facility* receives AAR *certification*.

3.4 Facility Audit Process

3.4.1 The lead auditor will contact the *facility* to schedule the *audit*, at which time the *facility* must confirm both the *audit* date(s) and its readiness for the QAP *audit*. These acknowledgments will be documented in the *audit* fee letter sent to the *facility*. The *audit* schedule will be developed in conjunction with the *facility*.

3.4.1.1 M-1003 facilities must submit their Quality Manual and completed QAPE checklist to the AAR Auditor approximately 60-days prior to the scheduled *audit*. This completed QAPE must identify the corresponding line item from their program that addresses each requirement in M-1003 Chapter 2. The auditor shall *audit* the *facility's* Quality Manual and QAPE to ensure that they meet this standard.

3.4.2 An opening meeting shall take place with the *facility* prior to the start of the *audit* to review the scope, *audit* criteria, resources, schedule, and *auditee* safety requirements. A list of attendees shall be documented.

3.4.2.1 Throughout the *audit*, the *facility* shall be prepared to provide documentation supporting the QAP.

3.4.3 The lead auditor and the applicable *audit team* shall perform the *audit* and document the evidence collected.

3.4.4 During the course of the *audit*, potential *adverse audit findings* shall be brought to the attention of the *facility*. Once validated, the *adverse audit findings* shall be documented by the lead auditor.

3.4.5 A closing meeting shall be held with the *facility* at the conclusion of the *audit* to discuss the results of the *audit*. A list of attendees shall be documented, and written finding(s) shall be provided.

3.5 Adverse Audit Finding Reports

All *adverse audit findings* shall be documented on the *Adverse Audit Finding* Report (AAFR) form and signed by the lead auditor. The lead auditor will provide the *facility's* primary point of contact with the completed AAFR form.

3.6 Facility Responses to Adverse Audit Finding

3.6.1 The *facility* is required to address each *noncompliance*.

3.6.2 The *facility* shall respond to the lead auditor in writing on each *noncompliance* and within 30 calendar days from the issuance of the *Adverse Audit Finding* Report(s). The *facility* shall demonstrate *compliance* with M-1003, Chapter 2, element 2.6, by performing a complete root cause analysis and describing the appropriate *corrective action* with respect to each *noncompliance*.

3.6.3 If the lead auditor determines that the *facility's* initial response to the *adverse audit finding* does not resolve the *noncompliance*, the lead auditor may grant the *facility* a second opportunity to amend their response. The *facility* will have 15 calendar days from the rejection notification date to resubmit their root cause analysis and proposed *corrective actions* to the lead auditor.

3.6.4 In the event the second response to an *adverse audit finding* does not resolve the *noncompliance* to the satisfaction of the lead auditor, the unresolved *adverse audit finding(s)* with reason for rejection and the final *audit* report will be forwarded for disposition to the *Audit Agency* management, QAC Manager, and when applicable the Technical Committee Manager with responsibility for approval of the *activity*. The *certified facility* may continue to operate pending the formal disposition.

3.7 Certification

3.7.1 The lead auditor will prepare a recommendation and submit the final *audit* report to the QAC and applicable AAR technical committee for processing.

3.7.2 After the final *audit* report has been processed by the QAC and any required technical committee, notification will be made to the *facility*.

3.7.3 Once the *facility* is approved for *certification*, the *facility* will be added to the AAR M-1003 registry of *certified* companies available at https://aar.iirx.net/Registries/M1003.

3.8 Maintaining Certification

3.8.1 Table 3.1 defines the M-1003 *certification* cycle. Each *certification* is in effect for a period of 3 years subject to annual *compliance audits*. *Compliance audits* may address all or selected program elements as specified in Chapter 2, as per the requirements in paragraph 3.4.

Table 3.1 M-1003 Certification cycle

Year	M-1003 Certification	Audit Type Abbreviation
0	Initial *Certification Audit*	CT
1	*Compliance Audit*	C1
2	*Compliance Audit*	C2
3	*Recertification Audit*	RE

3.8.2 The QAC may increase the frequency of *audits* (Special Quality Assurance *Audits*) based upon documented unsatisfactory quality performance. Examples of documented unsatisfactory quality performance include, but are not limited to, such items as unresolved AAFRs, *nonconformance* reports, and results of industry *audits*/inspections.

3.8.3 Recertification is not automatic and can be denied if the *facility* has demonstrated an inability or unwillingness to resolve *noncompliances*, and/or *nonconformances*. When *noncompliance*, and/or *nonconformances* cannot be resolved by the *facility*, the QAC reserves the right to schedule a formal meeting with the *facility*.

3.8.4 A *facility* that opts not to maintain *certification* may operate under its existing *certification* until expiration provided a period of no more than 15 months has elapsed since the completion of the previous *audit*.

3.8.5 When an M-1003 *certified facility* does not supply or provide service to the North American Railway Interchange Service for a period longer than 36 months, the *facility's* M-1003 *certification* will be withdrawn at the discretion of the QAC. If the *facility* requests to be *certified* again then the *facility* must apply for new M-1003 *certification*.

3.9 Procedure for Change Notification

This section outlines the process a *facility* is to follow regarding notifications related to changes in ownership, changes in location, changes to *facility*/corporate point(s) of contact, and adding and removing *activity code(s)*. *Activity code* requests with technical requirements must follow applicable committee guidelines and instructions. *QA codes* established at initial *certification* are permanent. All correspondence must be directed to QA@AAR.com.

3.9.1 Change in Ownership or Name

If a *facility* changes ownership or name only, the *facility's* new owner is responsible for submitting a dated letter on company letterhead that includes the following:

- *QA Code*
- *Facility's* Previous Name
- *Facility's* New Name
- Date of Transfer of Ownership
- *Facility* Point of Contact
- Corporate Point of Contact (name, address)
- A paragraph stating no changes have been made to any element of their QAP

3.9.2 Change in Location

3.9.2.1 If a *facility* changes its physical location only, the *facility* must submit a dated letter on company letterhead, 60 days in advance, that includes the following:

- *Facility* Name
- *QA Code*
- Current Address
- New Address
- Date of Relocation
- A paragraph stating no changes have been made to any element of their QAP

3.9.2.2 If a *facility* changes its physical location and any element of their QAP they must apply for new M-1003 *certification*. The existing *certification* will not be valid for operations at the new location.

3.9.3 Adding Activity Codes

3.9.3.1 A *facility* may request the addition of *activity code(s)* after initial *certification* by completing a dated letter on company letterhead that includes the following:

- *QA Code*
- *Facility* Name
- List of Current *Activity Code(s)*
- List of Requested *Activity Code(s)*

3.9.3.2 The addition of *activity codes* that require a *technical approval* may necessitate a *recertification audit*. The *facility* cannot add *activity codes* after the *audit* has been scheduled.

3.9.3.3 The *facility* may perform work associated with the newly added *activities* for which it has applied for *certification*; however, the *facility* shall not release any newly added *activities* until the *facility* receives AAR *certification.*

3.9.4 Removing Activity Codes

3.9.4.1 A *facility* may request the removal of *activity code(s)* after initial *certification* by completing a dated letter on company letterhead that includes the following:

- *QA Code*
- *Facility* Name
- List of current *activity code(s)*
- The effective date of withdrawal
- A statement specifying which *activity code(s)* the *facility* wants withdrawn from its *certification*

3.9.5 Facility/Corporate Point of Contact Changes

3.9.5.1 A *facility* is responsible for assuring both the *facility*/corporate point of contacts remain current within the online system at http://aar.iirx.net. All assigned point of contact individuals must have an active account in the online system. Change requests must be completed through the online system at http://aar.iirx.net.

3.9.6 Adding Facility Locations

When an M-1003 *certified facility* is adding an additional *facility(s)* that has (have) a different physical address, they must apply for a new M-1003 *certification*.

3.9.7 If an M-1003 certified facility requests to be withdrawn from the M-1003 QAP, they must complete a dated letter on company letterhead that includes the following:

- *QA Code*
- *Facility* Name
- Date requested to be withdrawn
- Brief description of reason(s) why they are requesting to be withdrawn

3.10 Audit Termination or Rescheduling

3.10.1 Facility Requests

In instances when a *facility* requests an *audit* be rescheduled or terminated, the auditor will immediately contact the QAM and the *audit agency* manager to review the request.

3.10.1.1 If the *facility* requests the *audit* be rescheduled due to unforeseen circumstances beyond its control, the QAM and the *audit agency* manager will review and discuss the circumstances for the *facility's* request and may permit the auditor to reschedule (one-time allowance) the *audit* on an expedited basis. For rescheduled *audits*, the auditor will coordinate with the *facility* for scheduling. The *facility* is responsible for all costs associated with a rescheduled *audit*.

3.10.1.2 If the *facility* requests the *audit* be terminated, the auditor will immediately notify the QAM and the *audit agency* manager and inform the *facility* that its current M-1003 *certification* will be withdrawn immediately. If the auditor is unable to contact the QAM and the *audit agency* manager, the auditor may leave the *facility* after informing them that request for termination has been forwarded to QAM and the *audit agency* manager. For *audits* terminated by the *facility*, if the *facility* desires M-1003 *certification*, it must reapply for new M-1003 QA *certification* in accordance with paragraph 3.3.

3.10.2 Auditor Requests

In instances when an auditor believes an *audit* should be terminated or rescheduled (e.g., unsafe conditions or hostile work environment), the auditor may suspend the *audit* and immediately contact the QAM and the *audit agency* manager to review the request. If the auditor is unable to contact the QAM and the *audit agency* manager, the auditor may leave the *facility* after informing them that the *audit* has been suspended pending consultation with the QAM and the *audit agency* manager.

3.10.2.1 If the QAM or *audit agency* manager approves the auditor's request to terminate the *audit*:

3.10.2.1.1 The QAM or *audit agency* manager will notify the *facility* and responsible technical committees that the *audit* was terminated.

3.10.2.1.2 The auditor will complete the Audit Termination Report recommending denial or withdrawal of *certification* and provide a copy to the QAM and *audit agency* management.

3.10.2.1.3 The QAM will present the completed Audit Termination Report to the QAC for processing.

3.10.2.1.4 If the QAC processes the Audit Termination Report to deny or withdraw *certification* it will be addressed per 3.11 of this standard.

3.10.2.2 If the QAM or *audit agency* manager approves the auditor's request to reschedule the *audit* due to unforeseen circumstances beyond its control:

3.10.2.2.1 The QAM or *audit agency* manager will notify the *facility* and responsible technical committees that the *audit* has been recommended for rescheduling.

3.10.2.2.2 The auditor will complete the Audit Termination Report recommending *audit* rescheduling and provide a copy to the QAM and *audit agency* management.

3.10.2.2.3 The QAM will present the completed Audit Termination Report to the QAC for processing.

3.10.2.2.4 If the QAC processes the Audit Termination Report to reschedule the *audit*, the auditor will coordinate with the *facility* to reschedule the *audit*.

3.11 Denial or Withdrawal of Certification

The QAC and the Technical Committee(s) responsible for approval of the applicable *activity* will deny initial *certification* or withdraw existing *certification* as set forth below. If *certification* is denied or withdrawn, the AAR will provide formal written notice to the *facility* of that decision within 14 calendar days.

3.11.1 Quality Assurance *certification* shall be denied or withdrawn if the *facility* fails to establish or maintain a QAP in accordance with this specification.

3.11.2 *Technical approval*/*certification* shall be denied or withdrawn if the *facility* fails to demonstrate the minimum technical capabilities.

3.12 Request for Reconsideration

When a *facility* receives a formal notification that an AAR *certification* (whether Quality Assurance or Technical) has been denied or withdrawn, the *facility* has 14 days to request reconsideration. To request reconsideration, the *facility* must submit a written request (email is sufficient) to the QAC Manager and/or the relevant Technical Committee Manager that sent the notification of *certification* denial or withdrawal. For tank car *facility* QA *certifications*, the request must be directed to the AAR Tank Car Committee Manager. The request should include a concise statement of the reasons reconsideration is being requested, including any specific factual or legal error(s) alleged, and any relevant new information not previously presented to the certifying Committee(s). A decision on the request for reconsideration will be issued in writing within 30 calendar days. The reconsideration decision will set forth the basis for the Committee(s) decision.

3.13 Appeals

If a request for reconsideration presented in accordance with paragraph 3.12 is denied, the *facility* has 14 calendar days after receiving notice of the decision to appeal in writing to the AAR Mechanical Committee. A *facility* must have requested reconsideration in order to be eligible to request an appeal. The appeal should be addressed to AAR's Assistant Vice President for Technical Services. To be considered, the appeal must identify a factual or legal error by the certifying Committee(s). The AAR Mechanical Committee will evaluate the appeal on the basis of the record before the certifying Committee(s) below; the *facility* may not supplement the record on appeal. However, if the AAR Mechanical Committee concludes that the record is lacking relevant and important information, the AAR Mechanical Committee in its sole discretion may remand a matter back to the certifying Committee(s) with instructions for specific further factual development and another reconsideration decision, to be issued within 90 days of remand. The AAR Mechanical Committee will reverse a reconsideration decision only where the *facility* has demonstrated that the Committee(s) below committed clear error. Appeals will be decided within 90 days of being requested (unless the matter is remanded), and the basis for the decision will be summarized in writing.

3.14 Status of Existing Facility Certification Pending Review/Appeal

Where a *facility* previously held an AAR *certification*, the withdrawal of that *certification* will be stayed pending resolution of any timely filed requests for reconsideration and appeal.

3.15 Confidentiality of Quality Assurance Information

Auditors will not disclose any information to which they have access as a result of quality assurance *audits* except as necessary to carry out the purposes of the AAR QAP. This may include disclosure to AAR staff, *QAM*, *audit team*, QAC, applicable AAR Technical Committee(s), and government safety agencies. When specifically requested by the applicant, a standard nondisclosure agreement consistent with the foregoing will be provided by AAR.

CHAPTER 4. RESERVED

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CHAPTER 5. COMMONLY USED HYPERLINKS FOR SECTION J QUALITY ASSURANCE PROGRAM

- AAR QA Resource Center - iirx
- Chpt 7 Nonconformance - iirx
- MSRP Publications
- MSRP Online Library
- Circular Publications
- Circulars Library
- QAPE link
- Auditor Handbook
- MxV Rail QA Page
- Views and Interpretations

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CHAPTER 6. QUALITY ASSURANCE COMMITTEE

6.1 *Quality Assurance Committee (QAC)* Mission Statement

6.1.1 The *QAC*'s mission is to promote continuous improvement, reliability and durability of materials, products, and services for use in North American Railway Interchange with the goal of ensuring safety and operational integrity.

6.2 Responsibility

6.2.1 The *QAC* shall be responsible for the following:

6.2.1.1 Developing and maintaining the AAR *MSRP* Section J and governing the *Quality Assurance Program (QAP)*, subject to approval by the AAR Mechanical Committee.

6.2.1.2 Determining that adequate committee and auditing procedures are prepared, documented, and maintained.

6.2.1.3 Making recommendations to the AAR Mechanical Committee or technical committees concerning new areas for *certification activities* or major changes in policy.

6.2.1.4 Evaluating and formally accepting those quality standards and other related documents used for the *certification* program.

6.2.1.5 Performing other such duties as may be assigned to it by the AAR Mechanical Committee.

6.2.1.6 Processing *facility certification* in accordance with Chapter 3. For tank car facilities, the QAC makes *certification* recommendations to the Tank Car Committee for final disposition.

6.3 Membership

6.3.1 The QAC shall consist of Railroad, Affiliate, and Associate Members, assigned by the AAR Mechanical Committee.

6.3.2 Any member of the QAC should be able to demonstrate experience in auditing of quality systems and a working knowledge of Specification M-1003, and/or participate in an AAR Auditor Training Seminar.

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CHAPTER 7. QUALITY ASSURANCE NONCONFORMANCE REPORTING

7.1 Objective of Nonconformance Reporting

7.1.1 The objective of *nonconformance* reporting is to document and provide traceability of a failure or *nonconformance* of an M-1003 certified facility's activity, including those facilities that are certified on a voluntary basis, as defined in the *Manual of Standards and Recommended Practices (MSRP)*. The disposition and corrective action shall be documented to ensure that the cause of failure is eliminated, and follow-up is initiated to ensure the corrective action is effective and permanent.

7.1.2 The response to *nonconformance* reporting requires five steps:

7.1.2.1 Clear and comprehensive *nonconformance* description.

7.1.2.2 *Nonconformance* disposition.

7.1.2.3 Root cause analysis.

7.1.2.4 *Corrective action* taken to eliminate root cause(s).

7.1.2.5 Follow-up plan to ensure the *corrective action* is effective and permanent.

7.1.3 The *nonconformance* data will be used for continuous improvement of the industry by the *Quality Assurance Committee* and the respective Technical Committees.

7.1.4 The QA-7.1 *nonconformance* report must be directed to the M-1003 certified facility of the *Activity* deemed nonconforming.

7.2 Reporting Forms for Nonconformance

7.2.1 The Quality Assurance *Nonconformance* Report Form (QA-7.1), the Quality Assurance *Nonconformance* Response Form (QA-7.2), and the Quality Assurance *Nonconformance* Response Evaluation Form (QA-7.3) (AAR Web-based reporting at http://aar.iirx.net), must be used by railroads, private car owners, car builders, shippers, and companies authorized to do manufacturing, modifying, requalifying, repairing, reconditioning, or remanufacturing of *activities* as described in the AAR's *MSRP*. It shall be used to document the *nonconformance* of *activities*, premature failure of components, and failed-in-service conditions (those not due to normal wear, wreck damage, or abuse). With the exception of extenuating circumstances, which must be documented, the QA-7.2 form response dates must be no more than 60 days later than the initiation date of the QA-7.1 form, and the QA-7.3 form acceptance or refusal of the response shall be no more than 30 days after the response date. The QA-7.1, QA-7.2, and QA-7.3 forms and related correspondence are retained for 3 years.

7.2.2 The QA-7.1 form is prepared by the *initiator* and must be submitted within 30 days of finding the *nonconformance* as described and detailed in the specification. The QA-7.1 form must be maintained by hard- or electronic-copy, and available for *audit*. It shall provide sufficient information for identification and traceability. The QA-7.1 form may be supplemented with other paperwork if desired or needed. The QA-7.2 form and all attached supplements, when received, shall be filed with the QA-7.1 form, and made available for *audit*.

7.2.3 The *initiator* of the QA-7.1 form must provide the *facility* the opportunity to review the material at the *initiator's* location or determine with the *facility* where the material is to be forwarded. Where circumstances prevent the holding of material for the *facility* to review, such circumstances must be documented. The *facility* shall be consulted prior to disposition of the material.

7.2.4 Complete the QA-7.1 form using the online system at http://aar.iirx.net.

7.2.5 The QA-7.1 form includes:

7.2.5.1 *Initiator*, location, and date prepared.

7.2.5.2 Name of *facility* and plant location.

7.2.5.3 Item description and AAR specification, code, or standard that applies.

7.2.5.4 *Facility's* part number, pattern numbers, drawing numbers, return material authorization (RMA) number, purchase order number, and/or other identifying information.

7.2.5.5 Quantity of items received and inspected and quantity of items rejected.

7.2.5.6 An indication as to whether the material was new or had been reconditioned or requalified.

7.2.5.7 Serial number of rejected items or a unique identification of each rejected item or car number to distinguish it from identical items that are not rejected.

7.2.5.8 Use the attachment feature to include a clear and comprehensive description (pictures, diagrams, sketches when available) of the *nonconformance*, premature failure, or failure-in-service condition (those not due to normal wear, wreck damage, or excessive abuse). **Note:** Overly brief descriptions such as "Broken" or "Bad order" are not acceptable and not in *compliance* with this specification.

7.2.5.9 A statement of the action to be taken by the *initiator* for disposition of the nonconforming item(s).

7.2.6 Verify complete submission of the QA-7.1 form by receipt of automated email from support@iirx.net.

7.2.7 Upon submission of the QA 7.1 form, an automated email is sent from support@iirx.net to the *facility* management representative to respond with a completed QA 7.2 form.

7.3 Reporting Form for Nonconformance Response

7.3.1 The *facility* is obligated to advise the AAR and the *initiator* about the disposition of nonconforming items. The *facility* will accomplish this by completing the QA-7.2 form via the AAR Web site, http://aar.iirx.net. The QA-7.2 form may be supplemented with additional paperwork or photos by uploading to the "Attachments, Pictures, Reports" tab as required. A QA-7.2 form must be submitted within 60 days of the date recorded on the QA-7.1 form.

7.3.2 The QA-7.2 form includes the following information:

7.3.2.1 Serial number from the QA-7.1 form.

7.3.2.2 Date the QA-7.2 form is prepared.

7.3.2.3 Name of the *facility* and the plant location.

7.3.2.4 Name and location of *initiator*.

7.3.2.5 Date the QA-7.1 form was prepared.

7.3.2.6 Quantity of items rejected.

7.3.2.7 Description of the *nonconformance* copied from the QA-7.1 form. **Note:** This item is required to provide a direct correlation of the initiator's concerns with the response developed by the *facility* in paragraph 7.4.2.8.

7.3.2.8 A clear, comprehensive description of the *nonconformance*. Include all known information regarding the *nonconformance*. As applicable, answer the following questions: what, how much, where, when, extent, result of problem, and names of all who are affected.

7.3.2.9 A clear, comprehensive description of the disposition of the nonconforming item. Describe what was done to provide the *initiator* with conforming material or service, to remove nonconforming material from warehouse and inventories, and to prevent nonconforming material or service from continuing to be used. **Note:** This is *not* the *corrective action*.

7.3.2.10 A clear, comprehensive description of the root cause(s) of the *nonconformance*. The root cause is the cause that, if eliminated, will prevent recurrence of the *nonconformance*. **Note:** RCA tools may be attached to support the root cause analysis.

7.3.2.11 A clear, comprehensive description of the resultant *corrective action(s)*. The *corrective action* is the action taken that eliminates the root cause.

7.3.2.12 A clear, comprehensive description of the follow-up(s) implemented. The follow-up is the action taken to ensure the *corrective action* is effective and permanent.

7.3.3 Verify complete submission of the QA-7.2 form by receipt of automated email from support@iirx.net.

7.3.3.1 Upon submission of the QA 7.1 form, an automated email is sent from support@iirx.net to the *facility* management representative to respond with a completed the QA 7.2 form.

7.4 Verification of Responses

7.4.1 *Initiator* of the QA-7.1 form is responsible for the evaluation of the QA-7.2 form appropriateness.

7.4.2 The evaluation shall be completed, and the results, either positive or negative, transmitted to the *facility* and AAR using a QA-7.3 form within 30 days of receipt of the QA 7.2 form.

7.4.3 The *facility* shall have 30 days to revise the QA-7.2 form if the QA-7.2 form was incomplete or did not fully address all five *corrective action* steps found in paragraph 7.1.2.

7.5 Adequacy of Response

In the event the *facility* fails to adequately respond to Quality Assurance *Nonconformance* Reports, the QAC may elect to decline approval or withdraw *certification*.

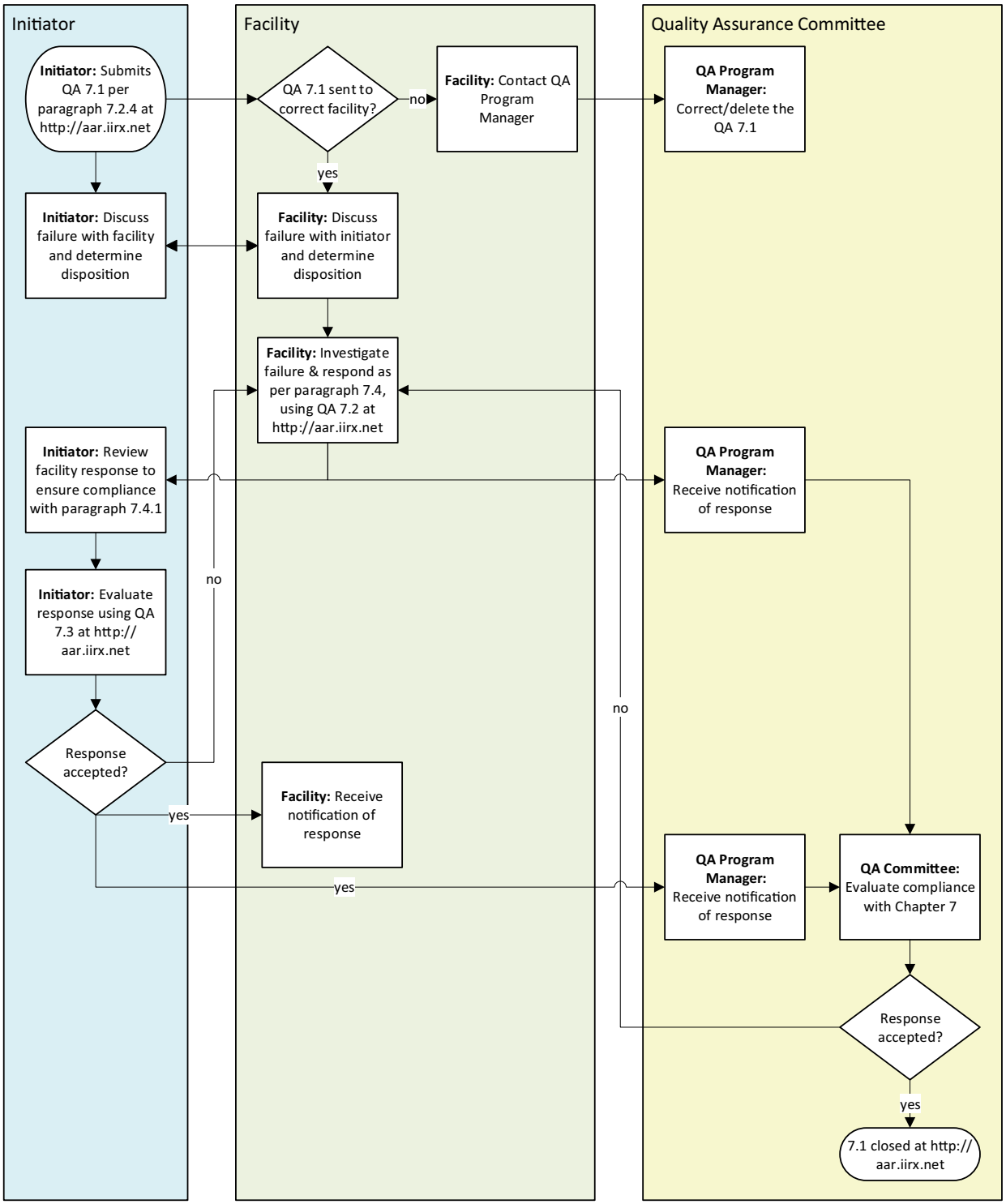

Fig. 7.1 Process map for *nonconformance* reporting

APPENDIX A
ACTIVITY CODE GUIDE

Shown below is a listing of *activities* that require M-1003 *certification*, the AAR *Field Manual* rule and/or circular letter that added the *activities* to the M-1003 program, and the number of the standard or specification that requires *technical approval* in addition to M-1003 *certification*.

Activity Group A

Activity Code	Activity Description	AAR Field Manual Rule Reference	AAR Circular		Technical Approval Required
			Reference	Date	
A1	Manufacturer of Journal Roller Bearings	36	C-7081/ C-8306	9/10/85– 1/31/95	M-934
A2	Blank				
A3	Manufacturer of Freight Couplers	16, 17, 18	C-7144	10/20/86	M-211 or M-215
A4	Manufacturer of Locomotive Couplers		C-8306	1/31/95	
A5	Manufacturer of Freight Knuckles	16, 17, 18	C-7144	10/20/86	M-211 or M-215
A6	Manufacturer of Locomotive Knuckles		C-8306	1/31/95	
A7	Manufacturer of Freight Yokes	19, 20	C-7144	10/20/86	M-211 or M-215
A8	Manufacturer of Locomotive Yokes		C-8306	1/31/95	
A9	Manufacturer of Freight Side Frames and Bolsters	47, 48	C-7144	10/20/86	M-210
A10	Manufacturer of Locomotive Truck Frames and Bolsters		C-8306	1/31/95	
A11	Manufacturer of Freight Cushioning Devices	59	C-7196	6/10/87	M-921/ M-921G
A12	Blank				
A13	Manufacturer of Wheels	41, 43	C-7149/ C-8306	11/10/86– 1/31/95	M-107/ 208
A14	Blank				
A15	Manufacturer of Axles	41, 43	C-7149/ C-8306	11/10/86– 1/31/95	M-101
A16	Manufacturer of Journal Roller Bearing Adapters		C-10535	6/12/07	M-924
A17	Manufacturer of Freight Brake Valves	4	C-7504	5/21/90	S-462
A18	Manufacturer of Locomotive Brake Valves		C-8306	1/31/95	
A19	Construction of Tank Cars by Manufacturing		CPC-1338	10/24/18	M-1002
A19c	Construction of Cryogenic Tank Cars by Manufacturing		CPC-1389	4/4/22	M-802/ M-1002
A20	Manufacturer of Freight Cars Including Tank Car Underframes		C-14715	12/29/25	M-802
A21	Manufacturer of Locomotives		C-8279	11/21/94	
A22	Manufacturer of Freight Car Major Subassemblies		C-14715	12/29/25	M-803
A23	Manufacturer of AEI Tags	63	C-9866	6/18/04	
A24	Manufacturer of Draft Sill End Castings		C-7144	10/20/96	

Activity Group B (Page 1 of 4)

Activity Code	Activity Description	AAR Field Manual Rule Reference	AAR Circular Reference	AAR Circular Date	Technical Approval Required
B1	Manufacturer of Roller Bearing Grease	26	C-7332	11/30/88	M-942
B2	Manufacturer of Freight Truck Springs	50	C-7144	10/20/86	
B3	Manufacturer of Locomotive Truck Springs		C-8331	3/31/95	
B4	Manufacturer of Center Plates	60	C-7149	11/10/86	
B5	Manufacturer of Freight Draft Gear	21	C-7149	11/10/86	M-901
B6	Reconditioner of Freight Draft Gear	21	C-7149	11/10/86	M-901B
B7	Manufacturer of Locomotive Draft Gear		C-8306	1/31/95	
B8	Reconditioner of Locomotive Draft Gear		C-8547	5/10/96	
B9	Manufacturer of Brake Hoses	5	C-7504	5/21/90	M-601/ M-618
B10	Manufacturer of Rubber Goods, Including Gaskets, Packing Cups and Diaphragms	4	C-7504	5/21/90	S-4001
B11	Manufacturers of Repair Kits	4	C-7504	5/21/90	S-4001
B12	Reconditioner of Freight Couplers	16, 17, 18	C-7145	10/20/86	M-212
B13	Reconditioner of Locomotive Couplers		C-8547	5/10/96	M-212
B14	Blank				
B15	Blank				
B16	Reconditioner of Freight Yokes	16, 17, 18	C-7145	10/20/86	M-212
B17	Reconditioner of Locomotive Yokes		C-8547	5/10/96	M-212
B18	Reconditioner of Freight Side Frames and Bolsters	47, 48	C-7833	4/30/92	M-214
B19	Reconditioner of Locomotive Truck Frames and Bolsters		C-8547	5/10/96	
B20	Reconditioner of Freight Cushioning Devices	59	C-7197	6/20/87	M-921C/G
B21	Manufacturer of Freight Car Brake Shoes	12	C-9951	11/3/04	M-926/ M-997
B22	Recondition Freight Car Hand Brakes	13	C-11360	12/21/10	
B23	Reconditioner of Locomotive Journal Roller Bearings		C-8547	5/10/96	H-II
B24	Maintenance and Modification of Tank Car Tanks		CPC-1338	10/24/18	M-1002
B25	Repair Shop *(Facility)*/Repair Track Engaged in Heavy Repairs	88	C-8405	9/11/95	
B26	Repair Shop *(Facility)*/Repair Track Engaged in Office Manual Rule 88.C *Activity*	88	C-8168	4/11/94	
B27	*Facility* Performing M-970 *Certifications*/Recertifications	88	C-8168	4/11/94	M-970
B28	Designated Satellite Shop Repairs	88	C-8168	4/11/94	M-992
B29	Manufacturer of Brake Beams	10	C-7504	5/21/90	S-344
B30	Reconditioner of Brake Beams	10	C-7505	5/21/90	M-300
B31	Freight Air Brake Repair *Facility*	4	C-7505	5/21/90	S-477
B32	Locomotive Air Brake Repair *Facility*		C-8547	5/10/96	

Activity Group B (Page 2 of 4)

Activity Code	Activity Description	AAR Field Manual Rule Reference	AAR Circular Reference	AAR Circular Date	Technical Approval Required
B33	Wheel and Axle Shop	41, 43, 36	C-7149/ C-7111	11/10/86– 2/11/86	H-II/ G-II
B33-1	Status Code 1 Wheel mounting shop-freight car (complete with wheel press and boring mill)	41, 43	C-7149	11/10/86	G-II
B33-2b	Status Code 2B Approved roller bearing repair shop-freight and Amtrak passenger car	41, 43	C-7149	11/10/86	H-II
B33-2E	Roller Bearing Cone Bore and Outer Ring Counterbore Plating	41, 43	C-7149	11/10/86	H-II
B33-2f	Status Code 2F Approved roller bearing repair shop-freight car	41, 43	C-7149	11/10/86	H-II
B33-2g	Cone Face Grinding				
B33-2p	Status Code 2P Approved roller bearing repair shop-Amtrak passenger car	41, 43	C-7149	11/10/86	H-II
B33-2s	Status Code 2S Roller bearing cone stress relieving approval				H-II
B33-3a	Status Code 3A M-967 Axle repair shop-journal, seal wear ring groove and water etch repairs-freight car	36	C-7111	2/11/86	G-II/ M-967
B33-3b	Status Code 3B M-967 Axle repair shop-journal repairs only-freight car	36	C-7111	2/11/86	G-II/ M-967
B33-3c	Status Code 3C M-967 Axle repair shop-dust guard repairs only-freight car	36	C-7111	2/11/86	G-II/ M-967
B33-4	Status Code 4 Wheel and axle shop-locomotive		C-8547	5/10/96	
B33-5	Status Code 5 Wheel and axle lathe(s)-freight car	36	C-7111	2/11/86	G-II
B33-6	Status Code 6 Wheel lathe(s)-freight car	36	C-7111	2/11/86	G-II
B33-6a	Status Code 6A Wheel lathe(s)-Amtrak passenger car	36	C-7111	2/11/86	G-II
B33-7	Status Code 7 Axle lathe(s)-freight car-New or Converted	36	C-7111	2/11/86	G-II
B33-7a	Status Code 7A Axle lathe(s)-Amtrak passenger car-New or Converted	36	C-7111	2/11/86	G-II
B33-7b	Status Code 7B Axle lathe(s)-freight car-Secondhand	36			G-II
B33-7c	Status Code 7C Axle lathe(s)-Amtrak passenger car-Secondhand	36			G-II
B33-8	Status Code 8 Wheel and axle shop-passenger car	36	C-7111	2/11/86	G-II
B33-8a	Status Code 8A Wheel and axle shop-Amtrak passenger car	36	C-7111	2/11/86	G-II
B33-9	Status Code 9 Roller bearing mounting—freight and Amtrak passenger car	36	C-7503	5/21/90	G-II
B33-10	Manufacturer of Freight Wheel Bearing Seals		C-12924	6/6/17	
B34	Blank				
B35	Manufacturer of Box Car Doors		C-11007	5/27/09	S-212, S-213
B36	Manufacturer of Nailable Steel Flooring		C-11007	5/27/09	M-964
B37a	Manufacturer of Locomotive Traction Motors		C-8331	3/31/95	

Activity Group B (Page 3 of 4)

Activity Code	Activity Description	AAR Field Manual Rule Reference	AAR Circular Reference	AAR Circular Date	Technical Approval Required
B37b	Reconditioner of Locomotive Traction Motors		C-8547	5/10/96	
B39a	Manufacturer of Locomotive Turbochargers		C-8331	3/31/95	
B39b	Reconditioner of Locomotive Turbochargers		C-8547	5/10/96	
B41a	Manufacturer of Locomotive Power Assemblies		C-8331	3/31/95	
B41b	Reconditioner of Locomotive Power Assemblies		C-8547	5/10/96	
B43a	Manufacturer of Locomotive Cylinder Heads		C-8331	3/31/95	
B43b	Reconditioner of Locomotive Cylinder Heads		C-8547	5/10/96	
B45a	Manufacturer of Locomotive Fuel Injectors		C-8331	3/31/95	
B45b	Reconditioner of Locomotive Fuel Injectors		C-8547	5/10/96	
B47a	Manufacturer of Locomotive Governors		C-8331	3/31/95	
B47b	Reconditioner of Locomotive Governors		C-8547	5/10/96	
B48a	Manufacturer of Locomotive Engine Protectors		C-10529	5/25/07	
B48b	Reconditioner of Locomotive Engine Protectors		TBD	TBD	
B49a	Manufacturer of Locomotive Fuel Pumps		C-8331	3/31/95	
B49b	Reconditioner of Locomotive Fuel Pumps		C-8547	5/10/96	
B51a	Manufacturer of Locomotive Water Pumps		C-8331	3/31/95	
B51b	Reconditioner of Locomotive Water Pumps		C-8547	5/10/96	
B53a	Manufacturer of Locomotive Oil Pumps		C-8331	3/31/95	
B53b	Reconditioner of Locomotive Oil Pumps		C-8547	5/10/96	
B55a	Manufacturer of Locomotive Radiators		C-8331	3/31/95	
B55b	Reconditioner of Locomotive Radiators		TBD	TBD	
B56a	Manufacturer of Locomotive Grid Resistors		C-10529	5/25/07	
B57a	Manufacturer of Locomotive Main Generators/Alternators		C-8331	3/31/95	
B57b	Reconditioner of Locomotive Main Generators/Alternators		C-8547	5/10/96	
B58a	Manufacturer of Locomotive Electronic Handbrakes		C-10529	5/25/07	
B59a	Manufacturer of Locomotive Air Compressors		C-8331	3/31/95	
B59b	Reconditioner of Locomotive Air Compressors		C-8547	5/10/96	
B61a	Manufacturer of Locomotive Engines		C-8331	3/31/95	
B61b	Reconditioner of Locomotive Engines		C-8547	5/10/96	
B63a	Manufacturer of Locomotive Cooling/Radiator Fans		C-9154	6/6/00	
B63b	Reconditioner of Locomotive Cooling/Radiator Fans		C-9154	6/6/00	
B64a	Manufacturer of Locomotive Starter Motors		C-10529	5/25/07	
B64b	Reconditioner of Locomotive Starter Motors		TBD	TBD	
B65a	Manufacturer of Locomotive Grid Blower Motors		C-9154	6/6/00	
B65b	Reconditioner of Locomotive Grid Blower Motors		C-9154	6/6/00	
B67a	Manufacturer of Locomotive Inertial/Equipment Blower Motors		C-9154	6/6/00	

Activity Group B (Page 4 of 4)

Activity Code	Activity Description	AAR Field Manual Rule Reference	AAR Circular Reference	AAR Circular Date	Technical Approval Required
B67b	Reconditioner of Locomotive Inertial/Equipment Blower Motors		C-9154	6/6/00	
B69	Locomotive Traction Motor/Wheel Combo Assembly		C-9154	6/6/00	
B70	Reconditioner of Slack Adjusters	8	C-9260	12/13/00	S-423
B71	Blank				
B72	Blank				
B74	Blank				
B75	Blank				
B76	Blank				
B77	Blank				
B78	Construction of Tank Cars by Assembly		CPC-1338	10/24/18	M-1002
B79	Blank				
B80	Blank				
B81	Qualification of Tank Car Tanks		CPC-1338	10/24/18	M-1002
B82	Manufacturer of Tank Car Tanks		CPC-1338	10/24/18	M-1002
B83	Blank				
B84	Blank				
B85	Manufacture of Tank Car Tank Components		CPC-1338	10/24/18	M-1002
B86	Blank				
B87	Maintenance and Qualification of Fuel Tanks for Locomotive Fuel Tenders		CPC-1338	10/24/18	M-1002
B89	Maintenance, Modification, and Qualification of Safety Systems		CPC-1338	10/24/18	M-1002
B90	Maintenance, Alteration, and Qualification of Tank Car Stub Sills		CPC-1338	10/24/18	M-1002

Activity Group C

Activity Code	Activity Description	AAR Field Manual Rule Reference	AAR Circular Reference	AAR Circular Date	Technical Approval Required
C1	Brake Hose Assembler	5	C-7505	5/21/90	
C2	Blank				
C3	Blank				
C4	Blank				
C4a	Assemble and Qualification of Tank Car Service Equipment		CPC-1338	10/24/18	M-1002
C4m	Manufacture and Qualification of Tank Car Service Equipment		CPC-1338	10/24/18	M-1002
C5	Maintenance and Qualification of Tank Car Service Equipment		CPC-1338	10/24/18	M-1002
C6	Blank				
C6i	Install Tank Car Service Equipment, Including Leakage Test		CPC-1338	10/24/18	M-1002
C6r	Remove and Replace Tank Car Service Equipment, Including Gaskets, Leakage Test, and Modifications		CPC-1338	10/24/18	M-1002
C7	Removal of Interior Linings and Interior Coatings in Tank Cars		CPC-1338	10/24/18	M-1002
C8	Installation and Qualification of Interior Linings and Interior Coatings in Tank Cars		CPC-1338	10/24/18	M-1002
C9	Qualification of Interior Linings and Interior Coatings in Tank Cars		CPC-1350	11/05/19	M-1002
C10	Maintenance and Qualification of Interior Linings and Interior Coatings in Tank Cars		CPC-1338	10/24/18	M-1002
C11	Blank				
C12	Maintenance and Qualification of Locomotive Fuel Tender Service Equipment		CPC-1338	10/24/18	M-1002

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APPENDIX D
RECOMMENDED PRACTICE FOR INTERNAL QUALITY AUDITING

1.0 SCOPE

Appendix D is a recommended practice that is intended to provide best practices for planning, performing, and recording the results of an internal *Quality Assurance Program (QAP) audit*. It is not a complete and comprehensive set of methods, instructions, or procedures applicable for all situations. Each user is encouraged to develop specific procedures using this document as a general guide where it applies.

An *audit* is a documented evaluation process aimed at verifying by examination that the applicable elements of the QAP have been established, documented, and effectively implemented in accordance with specified requirements.

2.0 AUDITOR

2.1 The auditor should be capable of planning, performing, recording, and following up on results of *audits* conducted in accordance with this recommended practice.

2.2 The auditor should be selected based on the scope of the *audit*.

2.3 The auditor should do the following in all matters related to the *audit*:

2.3.1 Maintain independence and organizational freedom.

2.3.2 Exercise discretion and observe confidentiality.

2.3.3 Conduct themselves in an objective manner.

3.0 AUDITEE

The *auditee* should provide access and cooperation necessary to conduct the *audit*.

4.0 AUDIT PLANNING

4.1 Scope

The auditor should establish the scope of the *audit*. As a basis for planning the *audit*, the auditor may review the *auditee* QAP documents, which include, but are not limited to, the Quality Assurance Manual, past *audit reports*, response to *audit findings*, *nonconformance* reports/responses, and governing technical specifications.

The scope includes development of *audit* criteria to evaluate the *auditee's compliance* with the specified requirements.

4.2 Resources

The auditor should determine the resources, including trained individuals, necessary to ensure that the *audit* scope can be accomplished.

4.2.1 In any *audit* conducted by a team of two or more individuals, a lead auditor should be designated. Personnel may be added to the team when required by the requirements of the *audit*.

4.2.2 The lead auditor should be the final authority regarding the performance of the *audit team*. Individual members of the team shall be responsible for their assigned tasks.

4.2.3 Scheduling

The auditor should schedule the *audit* with the *auditee* to ensure that the scope can be accomplished.

5.0 PERFORMING AN AUDIT

5.1 An opening meeting should take place with the *auditee* prior to the start of the *audit* to review the scope, *audit* criteria, resources, schedule, and safety requirements. A list of attendees should be documented.

5.2 The auditor should perform the *audit* and document the evidence collected. Potential and validated *adverse audit findings* should be brought to the attention of the *auditee* during the course of the *audit*.

5.3 *Adverse audit findings* should be brought to the attention of the *auditee*, documented, and signed by the auditor.

5.4 A closing meeting should be held with *auditee* at the conclusion of the *audit* to discuss the results of the *audit*. A list of attendees should be documented.

6.0 DISCONTINUANCE OF AUDIT

The *audit* may be discontinued by the *auditee* or auditor if the *audit* evaluation process cannot be completed.

7.0 AUDIT REPORTS

7.1 An *audit* report should be prepared by the lead auditor and contain the following:

7.1.1 A summary of the specified requirements *audited*.

7.1.2 A statement of the auditor's evaluation of *compliance* by the *auditee* with the relevant specified requirements.

7.1.3 A summary of *adverse audit findings*.

7.1.4 A description of the areas where *compliance* or *noncompliance* could not be determined because of insufficient evidence.

7.2 A copy of the *audit* report should be made available to the *auditee*.

8.0 ADVERSE AUDIT FINDING REPORTS

The lead auditor should issue a report on any *adverse audit finding* to the *auditee* for a response within a specified timeframe.

9.0 AUDITEE RESPONSE ADVERSE AUDIT FINDING REPORTS

An *adverse audit finding* response should include the following at a minimum:

9.1 Identify the nature and extent of the *adverse audit finding*.

9.2 Determine the immediate containment action(s). Note that this is not the *corrective action*.

9.3 Determine the root cause(s) of the *adverse audit finding* using problem-solving tools, methods, and techniques.

9.4 Establish and implement *corrective action(s)* needed to permanently eliminate the root cause.

9.5 Establish and implement follow-up plan(s) to verify effectiveness of the *corrective action*.

10.0 RECORD RETENTION

Audit documents should be retained for a specified timeframe.

11.0 PRODUCT AUDIT

Product *audits* may be conducted to verify conformity with specified requirements.

12.0 CONFIDENTIALITY

Audit information should be handled under an appropriate policy of non-disclosure and confidentiality.