QUALITY ASSURANCE PROVISIONS
(S/S OA-NR Form 174 Rev 09/17)
NORTHROP GRUMMAN DEFENSE
DOCUMENT OVERVIEW

This Quality Assurance Provisions document details Northrop Grumman Defense (referred to as “NG Defense”) quality requirements and expectations towards products and services rendered by external providers. This document forms a part of the NG purchase order unless otherwise specified by the purchase order. It contains general information and specific quality requirements of NG.

This document is divided into two sections:

Section 1: STANDARD QUALITY SYSTEM REQUIREMENTS. This section includes the quality requirements for all deliverable products and services procured by NG.

Section 2: SPECIFIC QUALITY SYSTEM REQUIREMENTS. This section includes specific requirements divided into individual clauses that are applicable to the external provider’s deliverable product(s) or service(s) only when the purchase order line explicitly includes these individual clause numbers e.g. Q7, Q8, or Q9.

The requirements in the engineering specifications, purchase order and/or documents referenced in the Quality Assurance Provisions, shall take precedence over the requirements in the Quality Assurance Provisions. Any exceptions to these requirements shall be explicitly stated within the Purchase Order. For example:

“The following requirements of the Quality Assurance Provisions do not apply to this Purchase Order Line: Section 1.0 A) Quality Management System., Section 1.0 D) First Article Inspection (FAI), Section 2.0 Q21 (1) microsectioned coupon.”

NG and its customers expect our external providers to deliver material that is 100% compliant with all the Purchase Order (PO) requirements.

The external provider shall notify the buyer in writing of any changes in process of the product or if any changes in the quality system occur within 72 hours of these changes. The external provider shall describe what changes have occurred (past condition versus the current condition) and define the impacts from these changes.

NG external providers shall flowdown the applicable requirements of this document to their sub-tier sources.
1.0 STANDARD QUALITY SYSTEM REQUIREMENTS

The requirements in this section apply to all subcontracts.

A) Quality Management System

The external provider shall implement and maintain a Quality Management System that complies with the applicable system standard or specification listed in Table 1 – Standard System Requirements

<table>
<thead>
<tr>
<th>External provider Product/Service</th>
<th>Acceptable Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer with Design Authority</td>
<td>AS9100 Certified</td>
</tr>
<tr>
<td>Manufacturer (Build-to-Print)</td>
<td>AS9100 Certified</td>
</tr>
<tr>
<td>Distributor</td>
<td>AS9120 or ISO 9001 Certified</td>
</tr>
<tr>
<td>Services</td>
<td>AS9100 or ISO 9001 Certified</td>
</tr>
<tr>
<td>Commercial items (COTS)</td>
<td>None imposed by NG</td>
</tr>
<tr>
<td>Tooling</td>
<td>AS9100 or ISO 9001 Certified</td>
</tr>
<tr>
<td>Calibration Services</td>
<td>ISO 17025 Certified</td>
</tr>
<tr>
<td>Outside Special Processor</td>
<td>AS9100 or ISO 9001 or AS9003 or Nadcap AC7004 Certified</td>
</tr>
</tbody>
</table>

B) Nonconforming Material Control and Material Review Board

External providers shall not ship nonconforming material to NG without written authorization from the Buyer. This includes integration of nonconforming components without NG approval.

External providers have authority to rework product to order requirements, return it to their sub-tier external providers, or scrap any material that is not NG furnished.

External providers shall notify the Buyer of all nonconformities to order requirements that require a repair or Use-As-Is deviation/waiver acceptance prior to delivery. Formal notification of nonconformance shall be in writing and in external provider’s format and must include:

- Description of nonconformance, with requirement and actual condition
- Recommended disposition including justification.

In the event a nonconformance is discovered that affects previously delivered product, the external provider shall notify the Buyer in writing of the condition within 24 hours of discovery. Notification must include defect description and identification traceability of the affected material by lot, serial, delivery, or date code numbers.

**Government-Industry Data Exchange Program (GIDEP) Alerts:** The external provider must be a member of GIDEP, if eligible, and take appropriate corrective and preventive actions on all suspect or defective material or suspect counterfeit or counterfeit parts reported by GIDEP alerts. Access to GIDEPs can be viewed at [www.gidep.org/gidep.htm](http://www.gidep.org/gidep.htm).

External providers shall utilize and provide feedback on any GIDEP data provided by NG that may be pertinent to items of its manufacture.
C) Shipping Documentation Requirements

Certificate of Conformance (C of C)

External providers shall provide a Certificate of Conformance for each separate shipment with the following minimum requirements:

- External provider's identification (company name, address and cage code)
- Date
- NG purchase order number, line item(s)
- Quantities
- Product traceability must include a unique identifier such as serial number, manufacturing lot number, job number, heat lot number or date code.
- Shelf life material date of expiration
- Part Number
- Part Revision
- Part Description
- Reference number for any NG authorized deviations
- A statement attesting to the conformance of the contract requirements
- Name/Title and Signature (electronic acceptable) of an appropriate authorizing representative.
- The C of C may be incorporated into the packing slip.

NG Final Source Inspection Report

If NG final source inspection is required, a Mission Assurance representative will complete a NG Source Inspection Report at the external provider’s facility after lot acceptance. This form is the only document that will attest NG's acceptance when utilized, and the original shall be maintained by the external provider. A photocopy of the completed form shall be submitted with each shipment of the accepted lot.

D) Material and Special Process Certifications

Special Processes include but not limited to: Firing, Pyrolysis, Autoclave Cure, Flame Metal Spraying, Welding, Heat Treatment, Platings, Coatings, Etching, Priming, Nondestructive Testing (i.e. Ultrasonic, Magnetic Particle, Dye Penetrate, and X-ray inspections, etc.), Environmental and Laboratory Testing, Descaling, Bronzing, Brazing, etc.

External providers and external provider’s sub-tiers who perform special processes or tests must assure personnel are qualified/certified as required.

External providers must retain and make available for NG review, raw material and process certifications demonstrating conformity to specifications as referenced in the dataset provided with the order. Certification shall include:

- Name and location of the process facility
E) First Article Inspection (FAI)

This requirement does not apply to COTS items.

Production Process Verification (First Article Inspection) per AS9100D is required. See Q41 if applicable.

External providers shall perform a FAI for affected characteristics when the following occurs IAW AS9102.

- A change in the design characteristics affecting fit, form, or function of the part.
- A change in manufacturing source(s), process(es), inspection method(s), location of manufacture, tooling, or materials that can potentially affect fit, form, or function.
- A change in numerical control program or translation to another media that can potentially affect fit, form, or function.
- A natural or man-made event, which may adversely affect the manufacturing process.
- An implementation of corrective action required to complete a previous FAI.
- A lapse in production for two years shall require an update for any characteristics that may be impacted by the inactivity. This lapse is from the completion of last production operation to the actual restart of production.

A partial FAI is acceptable IAW AS9102.

The preferred format for the report is per AS9102, but contractor format is acceptable with validation by NG for compliance with AS9102.

External providers shall notify NG in writing 10 working days prior to the FAI. Unless otherwise specified by the buyer, FAI acceptance will occur at the external provider’s facility.

F) Obsolescence

On a best effort basis, the external provider agrees to perform an obsolescence analysis or end of life (EOL) notification when the component or material is no longer in production by the manufacturer. The purpose is to keep NG informed of any potential component or material that may become obsolete.

External providers will provide a list describing the obsolescence/EOL issues to the NG Buyer. Additionally, external providers will provide options and recommendations of obsolescence/EOL issues to the NG buyer. This can include a onetime purchase of all EOL type material, the qualification of an alternate external provider/item, or a re-design of the affected assembly.
G) **Foreign Object Damage / Debris (FOD)**

The external provider shall maintain a Foreign Object Damage (FOD) prevention plan/program to prevent unintended material from being closed within a product or product packaging.

External providers have sole responsibility to inspect for FOD and ensure that prior to closing inaccessible, and obscured areas and compartments during assembly, all debris is removed. External provider shall inspect for foreign objects, such as materials, personal items, contaminants, or anything not part of the assembly, and ensure area is free of FOD barriers which may remain embedded. External providers shall ensure that tooling, fixtures, and test handling equipment are maintained in a state of cleanliness.

By delivering items to NG, external providers shall be deemed to have certified to buyer that such items are free from any foreign materials that could result in FOD.

H) **Individual Packaging Identification**

If the items of an order are packaged in individual or multi-unit containers, the outside of the containers must be identified with the part number and lot number or serial number if applicable.

I) **Material Useful Life**

If a deliverable product is age-sensitive (material having definite characteristics of quality degradation or drift with age and/or environment), the external provider shall mark the product with the expiration date and storage environmental requirements in accordance with MIL-STD-129. The material must have at least 75% remaining useful life at time of shipment.

J) **ESD Control and Packaging**

If Electrostatic Sensitive Devices are included in this order, the external provider shall maintain a program for Electrostatic Sensitive Devices (ESD) control for hardware items to be furnished in accordance with one or more of the following standards:

- MIL-STD – 1686 Electrostatic Discharge Control Program for Protection of Electrical and Electronic Parts, Assemblies and Equipment (excluding Electrically Initiated Explosive Devices)
- ANSI-S20.20 Parts, Electrical and Electronic, Assemblies and Equipment, Protection of (excluding Electrically Initiated Explosive Devices), for the Development of an Electrostatic Discharge Control Program
- JESD625, Requirements for Handling Electrostatic Discharge Sensitive Devices

K) **Safety Data Sheets**

If this order includes the purchase of chemicals, safety data sheet(s) shall be provided by the external provider. All materials that are volatile, toxic or emit fumes, which may be harmful to human health, shall be properly contained in accordance with applicable Code of Federal Regulations. The containers will be plainly marked as to contents with appropriate warnings, precautions, instructions and storage conditions.

L) **Mission Assurance Monitoring**

NG may perform periodic on-site surveillance to review quality system elements as well as operation and control of processes to meet the requirements for the provision of products and services.
2.0 SPECIFIC QUALITY SYSTEM REQUIREMENTS

The requirements within the clauses in this Section apply individually and independent of each other when the purchase order line explicitly references an individual clause number e.g. Q7, Q8, or Q9.

Q5 Test Reports

When testing per an NG drawing requirement, or to an NG ATP, the external provider must submit test reports with actual test results with the shipment, or have them uploaded to an NG external provider folder whenever Q41 provision has been added to a purchase order. When applicable, the report shall include traceability information such as NG PO number, external provider’s name and address and/or laboratory’s name and address, part number, part name, serial number(s), etc.

Q6 NG Final Source Inspection

Verification or validation of final process, product, or service by NG at external provider’s facility required, the external providers shall furnish, at no cost to the buyer, the necessary facilities, equipment, and support to perform verification or validation of inspections and tests required to demonstrate conformance to the order requirements. External providers shall notify the NG buyer 7 days prior to verification need to permit scheduling. Inspection shall take place within 2 business days from agreed schedule or source inspection requirement shall be waived with inspection acceptance upon receipt at NG regardless of destination.

Q7 NG In-Process Source Inspection

In-Process verification or validation of process, product, or service by NG at external provider’s facility required. All items covered by this PO are subject to in-process validation or verification by the buyer’s Quality Assurance representative at the point of manufacture. This includes inspection of soldering/assemblies and surveillance of the external provider’s systems, procedures and facilities. External providers shall furnish, at no cost to the buyer, the necessary facilities and equipment to perform verification or validation of inspections and tests required to demonstrate conformance to the order requirements. External providers shall notify the NG buyer 7 days prior to verification need to permit scheduling. Inspection shall take place within 2 business days from agreed.

Q8 Government Source Inspection (GSI)

Government Source Inspection at external provider’s facility required. (The items covered by this PO are subject to Government Source Inspection and/or test at all times and places prior to shipment. Upon receipt of this order, promptly notify the Government Quality Assurance Representative (QAR) who normally services your plant so that appropriate planning can be accomplished. In the event the QAR or office cannot be located, the buyer must be notified.)

Q15 Dimensional Inspection Report

External providers shall submit a complete Report to NG demonstrating verification of the requirements to the order. See Q41 if applicable. The report shall be submitted with delivery of the items(s) for NG review and acceptance.

Q21 Circuit Board Requirements

Bare Boards shall be fabricated per NG provided data with concurrent workmanship process coupons, (2) microsections shall be prepared for acceptance testing. See Q41 if applicable. Each shipment shall include:
- (1) workmanship process coupon
- (1) microsectioned coupon

Printed Circuit Boards shall be 100% tested per NG provided data.

**Q35 Tin Whisker Mitigation**

Process Specification for the AGM-88E AARGM Requirements for Tin Whisker Mitigation in Electronic Components and Material Finishes, Document # 7554036, applies to this item.

**Q36 Key Characteristics Data**

When NG drawing, specification and/or purchase order includes “key characteristic” requirements, the External providers shall establish and maintain a process to measure, control, and monitor the variation of key characteristics using SAE AS9103, Variation Management of Key Characteristics, as a guide.

Key characteristics are the features of a material or part whose variation has a significant influence on product fit, performance, service life, or manufacturability. External providers shall identify key characteristics on which to monitor and report on during production. Any key characteristics identified on NG drawings shall be included in the key characteristics identified by the external providers.

Key characteristics raw, un-manipulated data shall be provided with each shipment and shall include the complete dataset for the product being shipped in Microsoft Excel format. See Q41 if applicable.

**Q40 Failure Reporting Analysis & Corrective Action System (FRACAS)**

External providers shall maintain a Failure Reporting And Corrective Action System/procedure (FRACAS). External providers shall perform a failure analysis on all returned products applicable to this PO. External providers may be required to present a Corrective Action Plan (CAP) at a Northrop Grumman Corrective Action Board meeting. This requirement will be effective as of 06/17/2020.

**Q41 Electronic Data Submittal**

When provided access by NG, deliverable data requirements (C of C, Raw material/ Special Process certs, Circuit Board Requirements, Test Data Report), may be uploaded using the provided NG portal in place of providing with shipment. Each delivery shall have a single file posted containing all required data using the following naming convention:

PN.SN.YYYYMMDD

PN shall be a NG part number

SN shall include all serial numbers in shipment; sequential serial numbers may be hyphenated or separated by dots. Records shall be in .PDF format.

YYYYMMDD shall indicate the date of shipment or submission of data e.g. 20180201 for February 1st, 2018.

**Q42 Software/Programmable Logic Supplier Requirements**

In addition to the basic quality systems requirements of this order, the Supplier shall ensure all software and programmable logic developed under this contract is written in accordance with the CMMI-DEV Maturity Level 3 model or a Northrop Grumman approved equivalent system.
The Supplier shall identify, to Northrop Grumman, any activity under this PO, which involves the initial development or modification of existing software or programmable logic as required by the product specific and program unique requirements. This will be explicitly stated in the Supplier Statement of Work (SSOW) and/or Supplier Purchase Order. The supplier shall ensure that these requirements are flowed down through Supply Chain Management to the identified sub tier suppliers supporting the items on this order to the lowest subassembly level. The Supplier shall make no changes to software or programmable logic embedded in deliverable hardware without written approval from the Northrop Grumman procurement agent. All change notifications shall include effectivity of the change.

The Supplier shall invite Northrop Grumman to all Software activities including but not limited to Software Document and Code Peer Reviews, Software Integration and Test activities, Software Change Control Boards, and other activities as identified by Northrop Grumman.

In addition, the supplier shall provide verification that the developed software/programmable logic meets all of the requirements. The supplier shall provide validation that the finished product performs as needed. Northrop Grumman reserves the right to witness the verification and validation of the developed software/programmable logic at the supplier’s facility including Software qualification activities.

Northrop Grumman reserves the right to conduct surveillance at the supplier’s facility to determine that the supplier’s quality system meets the requirements as set forth herein.
## REVISION HISTORY

This section describes the Revision History of the document. The change control process describes the maintenance, storage, and update process for this document.

The approved, released version of this document can be found in the Process Repository SharePoint site.

<table>
<thead>
<tr>
<th>Effective Date</th>
<th>Revision</th>
<th>Description of Change(s)</th>
<th>Prepared by</th>
<th>Approved by</th>
</tr>
</thead>
<tbody>
<tr>
<td>05/07/2018</td>
<td>-</td>
<td>Transferred from QMS Form 174 revision 09/17.</td>
<td>Mark Absher</td>
<td>Bill Graham</td>
</tr>
<tr>
<td>12/11/2018</td>
<td>A</td>
<td>Some of the quality provisions from OA-NR Form 174 Rev 09/17 have been incorporated into one standard quality provision (Q1) and others superseded or permanently removed. See Appendix A for a detailed description of changes. Changed from a QMA-FRM to a QMA-REF document.</td>
<td>Edward Bahia</td>
<td>EIT</td>
</tr>
<tr>
<td>02/14/2019</td>
<td>B</td>
<td>Updated per PICR-160. Removed “Q1” as an identification of the Standard Quality Clauses. Added Paragraph “H” (Packaging Identification) to Section 1. Updated Appendix A as described below:</td>
<td>Edward Bahia</td>
<td>EIT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>a) Moved Q22 clause from “deleted” to “incorporated into Section 1” group.</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>c) Updated all removed quality provisions by referencing the paragraphs where requirements can be found in CTM-P-ST-001.</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>d) Added all OA Clearwater Quality Clauses previously removed from OA-NR Form 174 Rev 09/17.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12/17/2019</td>
<td>C</td>
<td>Updated per PICR-416. Revised Clause E to incorporate AS9102 criteria to perform a FAI. Added Clause “K” (Safety Data Sheets) to Section 1.</td>
<td>Scott Kline</td>
<td>EIT</td>
</tr>
<tr>
<td>04/10/2020</td>
<td>D</td>
<td>Updated per PICR-481. Added QAP 42 as Software/Firmware Quality Provisions.</td>
<td>Ed Dantes</td>
<td>EIT</td>
</tr>
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</table>
### Quality Assurance Provisions

**Revision:** F  
**Functional Owner:** Mission Assurance  
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<table>
<thead>
<tr>
<th>Effective Date</th>
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<th>Approved by</th>
</tr>
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<tbody>
<tr>
<td>05/12/2020</td>
<td>E</td>
<td>Updated per PICR 537. Add to Section 1.0 C) Shelf life date of expiration.</td>
<td>Johanna Lainez</td>
<td>EIT</td>
</tr>
<tr>
<td>7/28/2020</td>
<td>F</td>
<td>Updated per PICR-599. Added requirement for notification of changes flow-down to sub-tiers. Updated Clause D to clarify that external provider must retain, not provide, material and process certs. Added Clause L Mission Assurance Monitoring. Revised Q5 for clarity. Revised Q 35 to remove redundant info and only reference 7554036.</td>
<td>Ed Bahia/ Dirk van Langenberg</td>
<td>EIT</td>
</tr>
</tbody>
</table>

This document is not controlled when printed or downloaded. Check on-line status for latest revision.
Appendix A – DOCUMENT CHANGE HISTORY

The following Quality Provisions have been transferred from OA-NR Form 174 Rev 09/17 and incorporated into Section 1 - Standard Quality System Requirements:

- Q2 – C of C
- Q3 – Material and Special Process Certifications
- Q11 – First Article Inspection
- Q12 – ESD Packaging
- Q13 – Quality Management System Requirements ISO 9001 – Reference: Table 1
- Q17 – Calibration Systems – Reference: Table 1
- Q22 – Material Identification
- Q23 – Material Useful Life
- Q29 – Quality Management System Requirements AS9100 – Reference: Table 1
- Q33 – Obsolescence Clause
- Q39 – Foreign Object Damage/Debris (FOD)

The following Quality Provisions have been revised, superseded or removed from OA-NR Form 174 Rev 09/17:

- Q1 – Standard Requirements - Revised. The following quality provisions have been incorporated into Section 1 - Standard Quality System Requirements: Q2, Q3, Q11, Q12, Q13, Q17, Q22, Q23, Q29, Q33 and Q39.

The following requirements have been removed from Q1:

- **Production**: Called out in AS9100
- **Record Retention**: Called out in CTM-P-ST-001 – Firm Fixed Price Order for Non-Commercial Items – U.S. Government, paragraph 49.C (2) and (3)
- **Flow Down**: Called out in CTM-P-ST-001 – Firm Fixed Price Order for Non-Commercial Items – U.S. Government, paragraph 5 (A)
The following Quality Provisions were part of OA Clearwater Quality Clauses and have been removed from our system:

- Q20 – Superseded. Previously incorporated into Q1 of OA-NR Form 174 Rev 09/17.
- Q25 – Removed. Previously removed from OA-NR Form 174 Rev 09/17
- Q26 – Superseded. Previously incorporated into Q1 of OA-NR Form 174 Rev 09/17
- Q27 – Superseded. Previously incorporated into Q1 of OA-NR Form 174 Rev 09/17
- Q28 – Prototype Hardware – Deleted.
- Q30 – Superseded. Previously incorporated into Q1 of OA-NR Form 174 Rev 09/17
- Q31 – Superseded. Previously incorporated into Q1 of OA-NR Form 174 Rev 09/17
- Q32 – Superseded. Previously incorporated into Q1 of OA-NR Form 174 Rev 09/17
- Q37 – Critical Safety Item (CSI) – Deleted.

The following Quality Provisions were part of OA Clearwater Quality Clauses and have been removed from our system:

- 22QC-100 – STANDARD CLAUSES (5, 8, 15, 22, 28, 46A) – Deleted
- 22QC-101 – STANDARD CLAUSES (5, 8, 15, 22, 28, 46B) – Deleted
- 22QC-200 – CHEMICAL CLAUSES (5, 8, 12, 15, 22, 28, 29) – Deleted
- 22QC-1 – GOVERNMENT SOURCE INSPECTION - Deleted
- 22QC-1A – GOVERNMENT SOURCE INSPECTION – Deleted
- 22QC-3 – ORBITAL ATK SOURCE INSPECTION/TEST – Deleted
- 22QC-4 – ISO 9001 – Deleted
- 22QC-4A – AS9100 – Deleted
- 22QC-5 - GOVERNMENT REVIEW OF PERFORMANCE – Deleted
- 22QC-6 – CERTIFICATE OF ANALYSIS – Deleted
- 22QC-7 – CERTIFICATION OF PROCESS – Deleted
- 22QC-8 – CERTIFICATE OF CONFORMANCE – Deleted
- 22QC-9 – TEST/INSPECTION DATA – Deleted
- 22QC-10 – DESTRUCTIVE ANALYSIS SPECIMENS – Deleted
- 22QC-11 – MATERIAL PACKAGING – Deleted
- 22QC-12 – CERTIFICATION OF MATERIAL/RAW – Deleted
- 22QC-13 – FIRST-PIECE INSPECTION – Deleted
- 22QC-14 – TRACEABILITY – Deleted
- 22QC-15 – ACCESS FOR FACILITY AUDIT AND SURVEILLANCE – Deleted
- 22QC-16 – MACHINED CASTING REQUIREMENT – Deleted
- 22QC-17 – CASTING LAYOUT REQUIREMENT – Deleted
- 22QC-18 – CASTING VERIFICATION – Deleted
- 22QC-19 – MACHINING QUALITY REPORTING – Deleted
- 22QC-20 – BERYLLIUM PACKAGING – Deleted
- 22QC-21 – SUPPLIER’S INSPECTION/TEST – Deleted
- 22QC-22 – NO CHANGE WITHOUT ORBITAL ATK APPROVAL – Deleted
- 22QC-25 – AS9102 FIRST ARTICLE INSPECTION CREATION AND MAINTENANCE (FAI) – Deleted
- 22QC-28 – INSPECTION/TEST OF SUPPLIES – Deleted
- 22QC-29 – OZONE DEPLETING AGENTS (ODAs – Deleted
- 22QC-32 – FAILURE ANALYSIS REPORT – Deleted
- 22QC-33 – PRECAP/INPROCESS INSPECTION – Deleted
- 22QC-34 – CALIBRATION – Deleted
- 22QC-40 – ISO 10007 – Deleted
- 22QC-41 – ESD CONTROL – Deleted
- 22QC-42 – MIL-PRF-55110 – Deleted
- 22QC-44 – SUBSTITUTION NO ALLOWED – Deleted
- 22QC-46 – SPECIALTY METALS – Deleted
- 22QC-46A – SPECIALTY METALS CLAUSE – Deleted
- 22QC-46B – RESTRICTION ON ACQUISITION OF CERTAIN ARTICLES CONTAINING SPECIALTY METALS – Deleted
- 22QC-47 – SERIALIZATION – Deleted
- 22QC-48 – SELLER SUPPLIER INFORMATION – Deleted
- 22QC-49 – AGE CONTROL – Deleted
- 22QC-50 – FASTENERS – Deleted
- 22QC-51 – STATISTICAL PROCESS CONTROL – Deleted
- 22QC-52 – KEY CHARACTERISTIC DATA – Deleted
- 22QC-53 – WITNESS SAMPLES – Deleted