

Chandler-Arrow Division

Arrow Supplier Quality Requirements

AQR-1 QUALITY SYSTEM

Supplier must maintain a quality system that meets, as a minimum, the requirements of ISO9001-2008, unless otherwise directed by Chandler-Arrow Division QA organization. Immediate notification is required in case of non-compliance to quality system requirements, e.g. loss of third party certification.

AQR-2 GOVERNMENT SOURCE INSPECTION

Government Inspection is required prior to shipment from your facility. Upon receipt of this order, promptly notify the government representative normally servicing your facility so that the appropriate planning can be accomplished. If a government representative does not service the suppliers' facility, notify the nearest Defense Contract Administrative Office for direction, or Chandler-Arrow Division.

AQR-3 CERTIFICATE OF CONFORMANCE

A certificate of conformance shall accompany each shipment of material defined in the purchase order. The certificate of conformance shall be legible in the English language and include the Chandler-Arrow Division purchase order number, part number, and revision letter (unless otherwise specified on the purchase order, the revision letter must be the latest revision in effect at the time of shipment), quantity, the Chandler-Arrow Division work order number, or when specified, the Chandler-Arrow Division material lot number (when purchaser supplied material) and the mill heat number when supplier supplied material, at a minimum. When a Chandler-Arrow Division purchase order contains parts from multiple Chandler-Arrow Division work orders, parts shall not be mixed and traceability shall be maintained to the work order. When multiple lots of material are used in completing a shipment, lots shall not be mixed and all material lot numbers or mill heat numbers shall be reported.

AQR-4 SAMPLING INSPECTION

Sampling inspection plans shall not allow defects within the sample. If defects are found within the sample, 100% inspection shall apply. All sampling plans must be submitted to Chandler-Arrow Division for approval.

AQR-5 CHEMICAL AND PHYSICAL TEST REPORTS

For raw material shipments, or where material was supplied by the supplier, physical and chemical test reports traceable to the material shall be supplied with each shipment. Test

reports shall be legible, in the English language, and include the material designation, specification and revision letter (material must be certified to the latest revision in effect at the time of shipment), results of all specified testing requirements, the mill heat number, and any other requirements specified on the purchase order. Also designate mill name, address, signature and date of Quality Representative, or company official. Also for Weld filler Material certs shall be to AWS A5.10 and AMS 4190.

AQR-6 RECORD RETENTION – NON-AEROSPACE

Supplier shall retain all records pertaining to material, manufacturing processes, special processes, testing, and inspection for a minimum of three (3) years as applicable. Supplier shall notify Chandler-Arrow Division prior to destruction.

AQR-6A RECORD RETENTION - AEROSPACE

Supplier shall retain all records pertaining to material, manufacturing processes, special processes, testing, and inspection for a minimum of thirty (30) years unless otherwise specified on the Purchase Order. Supplier shall notify Chandler-Arrow Division prior to destruction.

AQR-7 FIRST ARTICLE INSPECTION

First Article Inspection is required on a part representative of the production process to be used in the manufacture of these parts. A copy of the First Article document must accompany the first shipment of parts. If two years have elapsed since the last shipment of this part number, a new First Article Inspection is required. An AS9102-compliant first article inspection report (FAIR) must be completed when required by Chandler-Arrow Division. If an AS9102-compliant FAIR is not required, and Chandler-Arrow Division First Article Inspection Form or equivalent supplier form may be used and shall include the following:

Chandler-Arrow Division part number and drawing revision level;

Every characteristic including:

Tolerance (even if it is a block tolerance)

Actual measured value

Method of Gauging

Accept/Reject indication

Traceability to manufacturing/processing lot

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Where physical testing is required, the results of the test must be recorded. Where special processes are required, verification of each special process must be recorded, applicable certifications retained, and available for review, or submitted with the FAIR if requested by Chandler-Arrow Division. The signature and title of the person performing the inspection and date of inspection shall be included.

AQR-8 RIGHT OF ENTRY

Chandler-Arrow Division, its customers and regulatory agencies shall have the right to conduct surveys and perform surveillance of supplier facilities to evaluate their capability to comply with contractual requirements.

AQR-9 SPECIAL PROCESS APPROVAL

Heat treating, welding, electroplating, laser cutting, EDM, ECM, non-destructive testing, etc. are considered special process and require approval by Chandler-Arrow Division or NADCAP prior to use. The Certificate of Conformance shall include the specification number and revision of all special processing performed. Special processes, once approved, may not be changed without Chandler-Arrow Division or NADCAP approval of the changes.

AQR-10 APPROVED INSPECTION PLAN

When requested; suppliers shall submit a detailed inspection plan to Chandler-Arrow Division for approval before manufacturing begins. Supplier inspection shall be in accordance with the Chandler-Arrow Division approved inspection plan for the part number ordered.

AQR-11 APPROVED SOURCE OF MATERIALS

All material used in fulfilling this order must be supplied by a supplier approved by Chandler-Arrow Division unless specifically authorized in writing to the contrary.

AQR-12 TEST AND INSPECTION REPORTS

Test, calibration and inspection reports, with measured data as required by the applicable procurement specification, must accompany each shipment.

AQR-13 STATISTICAL PROCESS CONTROL

Statistical Process Control is required during the manufacture of the item(s) for which this requirement is called out. SPC shall be in accordance with a plan approved by Chandler-Arrow Division Quality Assurance.

AQR-14 CORRECTIVE AND PREVENTATIVE ACTION REQUESTS

Timely response to Chandler-Arrow Division requests for corrective and preventative action is required. The use of techniques to find and eliminate root causes is expected.

AQR-15 SUPPLIER SOFTWARE CONTROL PROGRAM

If software is used to control the manufacture, test, or acceptance of this purchase, the supplier shall maintain a program for positive control over revision status and program integrity. Software control plans are subject to approval by Chandler-Arrow Division.

AQR-16 EXPORT/IMPORT CONTROLS - ITAR

Supplier shall control the disclosure of, and access to, technical data, information, and other items including hardware received under this purchase order in accordance with U.S. export control laws and regulations, including but not limited to the International Traffic in Arms (ITAR) and the U.S. Department of Commerce, Bureau of Industry and Security (BIS), and Export Administration Regulations. Contact Chandler-Arrow's Purchasing for clarification or applicability if necessary.

AQR-17 SPECIALTY METALS

DFARS 252.225-7008: Restriction on Acquisition of Specialty Metals or 252.225-7009: Restriction on Acquisition of Certain Articles Containing Specialty Metals applies to this order if specialty metals are being furnished. For the purpose of this contract / purchase order, aluminum is considered specialty metal and the domestic preference applies. Contact Chandler-Arrow Division's purchasing for clarification or applicability if necessary.

AQR-18 PACKAGING AND PRESERVATION

The supplier shall maintain controls to assure accomplishment of preservation, packaging, and shipping requirements of the contract. The use of commercial practices shall not relieve the supplier of responsibility for packaging in a manner that will ensure receipt of supplies at Chandler-Arrow Division in acceptable condition.

AQR-19 APPROVED SUPPLIERS

All Chandler-Arrow Division approved suppliers are responsible for maintaining a list of their approved suppliers, and shall have it available upon request for review by Chandler-Arrow Division Quality Assurance. Information shall include name, address, nomenclature of parts

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or services provided, part numbers and other pertinent information requested by Chandler-Arrow Division Quality Assurance.

AQR-20 KEY CHARACTERISTICS

When key characteristics are present on the drawing or other technical documentation, they shall be monitored and controlled. The method of control shall be subject to review and disapproval by Chandler-Arrow Division.

AQR-21 LOCKHEED MARTIN QUALITY REQUIREMENTS

Supplier shall certify that, to the best of their knowledge and belief, all shipments made under our contracts with Lockheed Martin are in full compliance with the below listed DFARS clauses to the extent they are applicable. This certification assures that processes and procedures are in place to sustain this compliance, including processes that ensure flow-down of these clauses to sub-tiers, as applicable.

- 252.225-7007 – Prohibition on Acquisition of United States Munitions List Items From Communist Chinese Military Companies
- 252.225-7009 – Restriction on Acquisition of Certain Articles Containing Specialty Metals
- 252.204-7008 – Requirements for Contracts Involving Export-Controlled Items
- 252.225-7001 – Buy American and Balance of Payments Program
- 252.225-7006 – Quarterly Reporting of Actual Contract Performance Outside the United States
- 252.225-7013 – Duty Free Entry
- 252.225-7016 – Restriction on Acquisition of Ball and Roller Bearings
- 252.225-7021 – Trade Agreements
- 252.225-7033 – Waiver of United Kingdom Levies

Seller shall ensure all Seller sub-tier purchase orders and/or associated purchase order documents for buyer-controlled processes include the following data elements, statements,

or the statement in the note after f).

- a) Seller's unique LM Aero identification number ("Vendor Code") and all LM Aero unique "process codes" for each buyer-controlled process to be performed,
- b) A statement with words, "Processing to be accomplished in performance of this purchase order is directly related to a Lockheed Martin Aeronautics Company purchase order and must be accomplished in accordance with process specification(s) on this purchase order and Lockheed Martin Aeronautics Company Appendix QJ",
- c) A statement that seller's supplier must file and maintain a copy of all purchase orders containing the above statement and make these available for review by Buyer, upon request,
- d) A statement that seller's supplier must submit a Certificate of Conformance ("CoC") with a unique certification number containing the following information:
 1. Title and specification number (including revision letter) of the process,
 2. Name and address of the process or non-destructive testing("NDT") facility,
 3. Seller's supplier's unique LM Aero identification number ("vendor or processor code"),
 - i. If processor is utilized based on a Nadcap approval, a statement to the effect "Source utilized based on current Nadcap accreditation" shall be included,
 4. Date the CoC was issued,
 5. Purchase order part number,
 6. Quantity of parts (to included quantity accepted/ rejected)
 7. Signature and title of authorized quality agent of Seller, and
 8. Fracture durability classification or serialization, when required.

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- e) A statement to ensure Seller's sub-tiers suitably wraps, boxes or racks to guard against shipping damage and to apply rust or corrosion protection, and
- f) A statement requiring Seller's sub-tier to identify specification(s) title, specific revision level(s) and drawing(s) requirement(s) to be performed by a QCS-001 source.

Note: Seller can also use the following statement in lieu of the above statements a. – f. to meet the requirements of this paragraph:

Include Seller's unique LM Aero identification number (vendor code) and a statement with the words, "Processing to be accomplished in performance of this purchase order is directly related to a Lockheed Martin Aeronautics Company purchase order and must be accomplished in accordance with process specification(s) on this purchase order and the revision in effect as of the date of this PO of Lockheed Martin Aeronautics Company Appendix QJ. All requirements of such Appendix QJ paragraph 12. a.-f. shall be accomplished. Appendix QJ is located at <http://www.lockheedmartin.com/material-management/>."

AQR-22 CALIBRATION SYSTEM COMPLIANCE OF INSPECTION, MEASURING AND TEST EQUIPMENT

A system for the maintenance and calibration of inspection, measuring, and test equipment shall be maintained. ANSI/NCSL Z540-1 applicable to calibration activities. Acceptable alternative: MIL-STD-45662A "Calibration System Requirements" All calibration standards must be traceable back to National Institute of Standards and Technology (NIST) and the NIST test number shall be included on the certificate of conformance. If any measuring equipment is found to be out of tolerance, "As Found, As Left" data shall be included.

AQR-23 NONCONFORMING MATERIAL

The supplier must notify Chandler-Arrow Division Purchasing within 24 hours when a nonconformity is suspected or discovered in the supplier's processes or if nonconforming product has been delivered to Chandler-Arrow Division. Process nonconformities include periodic test failures.

Notification shall be documented on Supplier Concern Resolution Request – SCRR (PR-701-FM-1). It shall include, as a minimum, the following:

- 1. Part number and revision affected
- 2. Chandler-Arrow Division purchase order number(s)
- 3. A clear description of the nonconformity
- 4. Date(s) of processing
- 5. Traceability information where known, such as Chandler-Arrow Division work order number(s), lot or serial number(s).
- 6. Short term corrective action (containment plan) and contingency plan to meet delivery requirements.

AQR-24 BUYER FURNISHED MATERIAL

When Chandler-Arrow Division furnishes material, the Seller's System shall provide for the following:

- 1. Examination upon receipt for transit damage
- 2. Verification of quantity
- 3. Storage against damage, improper use or disposition
- 4. The seller must furnish certification that the parts used were those furnished by the Buyer and no un-authorized substitution was made.

AQR-25 ENGINEERING SPECIFICATION REQUIREMENTS

Unless a particular revision of an engineering specification document is listed, use only the latest revision of the specification in effect on the date of the contract. The requirements of these documents are hereby incorporated into this PO by this reference as applicable to respective contracts.

AQR-26 COUNTERFEIT PARTS PREVENTION

- a) For purposes of this clause, Work consists of those parts delivered under this Contract that are the lowest level of separately identifiable items (e.g., articles, components, goods, and assemblies). "Counterfeit Work" means Work that is or contains items misrepresented as having been designed and/or produced under an approved system or other acceptable method. The term also includes approved Work that has reached a design life limit or has been damaged beyond possible repair, but is altered and

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- misrepresented as acceptable.
- b) Supplier agrees and shall ensure that Counterfeit Work is not delivered to Chandler-Arrow Division.
 - c) Supplier shall only purchase products to be delivered or incorporated as Work to Chandler-Arrow Division directly from the Original Component Manufacturer (OCM)/Original Equipment Manufacturer (OEM), or through an OCM/OEM authorized distributor chain. If work is acquired from independent distributors or brokers the accompanying Certificate of Conformance must be traceable to the original manufacturer.
 - d) Supplier shall immediately notify Chandler-Arrow Division with the pertinent facts if supplier becomes aware or suspects that it has furnished Counterfeit Work.

We are requesting that you complete and provide to Chandler-Arrow the EICC / GeSi Conflict Minerals Reporting Template for your company which includes responses to all applicable questions on the "Declaration" tab and identification of the smelters in your supply chain on the "Smelter List" tab in the Template. The Template and training materials are available at: www.conflictreesmelter.org.

AQR-27 FOREIGN OBJECT DEBRIS (FOD)

Supplier shall establish and maintain an effective FOD prevention program through a continual improvement approach that proactively addresses and controls the events (conditions and actions) leading to FOD.

AQR-28 NOTIFICATION

Supplier shall notify Chandler-Arrow Division of changes in product and/or process, changes of suppliers, and changes of manufacturing facility location.

AQR-29 FLOW DOWN REQUIREMENT

Supplier is to flow down to sub-tier suppliers the applicable requirements in the purchasing documents, including key characteristics where required.

AQR-30 CONFLICT MINERALS

Under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, Chandler-Arrow is required to perform due diligence on its use of "conflict minerals" originating from the Democratic Republic of Congo ("DRC") and adjoining countries. "Conflict minerals" consist of tin, tantalum, tungsten and gold, the derivatives of cassiterite, columbite-tantalite, and wolframite. We are required to disclose to our customer the results of this due diligence. In addition, this due diligence process may be subject to audit by our end-customer. As a valued supplier, we require your assistance to comply with these regulations. In particular, you are required to inform Chandler-Arrow with regard to your use and sourcing of conflict minerals in products you sell to us.

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Revision History and Approval

Revision Level	Revision Description	Effective Date	Owner
			Manager
			QA
F	Formerly F-206-001-05. Changed from a form to a MD (Master Document). Previous history of changes not available.	5/02/12	Barry Katona
	References / links / PPG-Arrow Facility (name change) updated.		
	AQR-1 QUALITY SYSTEM; Changed ISO 9001:2000 to ISO 9001:2008		Kaija Kantola
	AQR-17 SPECIALTY METALS: Updated From:		
	DFARS 252.225-7014 Preference for Domestic Specialty Metals (Apr 2003)		
	To:		
	DFARS 252.225-7008 Restriction on Acquisition of Specialty Metals or 252.225-7009 Restriction on Acquisition of Certain Articles Containing Specialty Metals		
Added AQR-28 Notification per CPAR 12034.			
AQR-23 Nonconforming Material clarified per CPAR 12034.			
ASR-26 Counterfeit Parts Prevention; added requirement that C of C must be traceable to the original manufacturer.			
Added AQR-29 Flow Down Requirement			

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Revision Level	Revision Description	Effective Date	Owner
			Manager
			QA
G	AQR-21 – Added DFAR requirements.	5/03/13	Barry Katona
			Rick Smith (for Rick Epstein)
H	AQR-30 – Added Conflict Materials	12/6/13	Scot Hilden
			Rick Epstein
J	AQR 6 - Changed retention time for aerospace from 10 years to 30 years Changed PPG-Arrow Facility to Chandler-Arrow Division	3/12/14	Rick Epstein
			Shari Wynkoop
K	AQR 5 – Added cert requirements and weld cert information	12/23/14	Justin Corbitt

Note: When posted on PPG Corporate site, do not include “Revision History and Approval page”.