External Provider Quality Requirements

QCS-001 Processing Sources

The latest issue to this document is the version that is available on the Lockheed Martin Logistics Services Supplier Quality Management website: http://www.lockheedmartin.com/us/suppliers/bu-info/aeronautics/sustainment-services.html

Summary of Changes: Complete rewrite to align with LM Aeronautics Appendix QJ, AS9100D / AS9110C.

The terms “Item(s)”, “PO”, “External Provider”, and “Buyer” as used herein, have the same meaning as the terms “Work”, “Contract”, “Seller”, and “Lockheed Martin”, respectively.

Questions regarding QA022-02 or the applicability of QA022-02 shall be addressed to Lockheed Martin’s Supply Chain Management Representative (Buyer) who administers this PO.

SCOPE

This document contains the minimum quality requirements for QCS-001 Process Sources. It is emphasized that the quality system requirements specified in this document are complementary (not alternative) to the contractual and applicable law and regulatory requirements.

DEFINITIONS

QCS-001 Process Source - A processing source listed in QCS-001 that performs one or more of the special process specifications listed in QCS-001

Engineering Materials and Approved Products (EMAP) - On-line qualified products list of approved material manufacturers and products. To be used as required by Program specifications.

Key Personnel - Process Source personnel who have access to Lockheed Martin Aeronautics systems, any NDI Level II or Level III personnel, or company point of contact.

QCS-001 - Web-based, real-time database which lists special processes / specifications and approved sources for special processes / specifications. The list of both Buyer-controlled processes and Buyer approved QCS-001 sources can be found on Buyer’s Internet home page at:

http://www.lockheedmartin.com/us/aeronautics/materialmanagement.html.

Select Quality Requirements > Supplier Quality Management System > and follow instructions.

Special Processes - Processes for production and service provision where the resulting output cannot be verified by subsequent monitoring or measurement and, as a consequence, efficiencies become apparent only after the product is in use or the service has been delivered.

External Provider Quality Requirements
QCS-001 Processing Sources

External Provider Quality Requirements

QCS-001 Processing Sources

1. Quality Management System Requirements

1.1. Management Responsibility - Process Source's management shall:

a. Define and document its policy for quality, including objectives for quality and commitment to quality.

b. The Process Source shall also ensure that the policy is implemented and maintained at all levels of the organization, and accessible to all employees.

1.2. Quality System – Process Source shall:

a. Establish, document and maintain a quality system as a means of ensuring that product conforms to requirements. The Process Source shall prepare a quality manual covering the requirements of this document. The quality manual shall include or reference the quality system procedures.

b. Ensure that the quality system procedures are readily available to Process Source personnel who are responsible for ensuring compliance with requirements, and to customer and/or regulatory agency representatives.

1.3. Contract Review – Process Source shall:

a. Establish and maintain a process for contract review. Before acceptance of a contract, contract change notice or other required change, the Process Source shall:

1. Determine that the requirements are defined and documented.
2. Determine that they have the capacity and capability to meet all contract requirements.
3. Maintain records of contract reviews.

1.4. Document / Data Control – Process Source shall:

a. Establish and maintain documented procedures to control all documents / data and approved, released and relevant revisions are available, including those in electronic format.

b. Establish and maintain a system to prevent the use of obsolete documents.

c. Establish a process to ensure the timely review, distribution, implementation, and maintenance of all authorized and released drawings, standards, specifications and planning.

d. Maintain a record of change incorporation and, when required, shall coordinate these incorporations with the customer and / or regulatory authority.

External Provider Quality Requirements

QCS-001 Processing Sources

e. Be responsible for ensuring that sub-tier Process Source(s) have the appropriate revision level of the process standards / specifications prior to performing processing in connection with the Items listed on the purchase order.

f. Ensure Process Source's unique written procedures are relevant to the processes performed within their facility.

1.5. Purchasing – Process Source shall:

a. Ensure that the purchased product meets specified requirements, including, but not limited to, EMAP requirements, technical data sheets, etc.

b. Ensure PO documents clearly define the product ordered, including the applicable drawings, specifications, specification revision, processing requirements, and other relevant customer-defined data.

c. Perform reviews of sub-tier Process Source(s) quality performance to establish the level of controls to be implemented.

d. Ensure, prior to use, sub-tier Process Source(s) use Buyer-approved special process sources listed in QCS-001.

e. Ensure subcontracted sources are in full compliance with applicable process specifications and to deliver conforming Items as Process Source's utilization of Buyer-approved sources does not relieve Process Source from the obligations of the PO requirements.

1.6. Product Identification and Traceability – Process Source shall:

a. Establish and maintain a process for identifying a product or lot by suitable means from receipt and during all stages of production and delivery.

b. Maintain traceability throughout entire process when serialization is provided.

c. Maintain accountability and configuration control of all parts during all phases of processing.

d. Document and maintain control of split order quantities.

1.7. Process Control - Process Source shall:

a. Establish and maintain documented procedures which define the method for controlling processes (e.g. solution analysis and titration).

b. Intervals for solution analysis shall not exceed requirements related to the specification for the process performed.

c. Titration shall be performed at the interval required to maintain tank compliance.

External Provider Quality Requirements

QCS-001 Processing Sources

1.8. Verification and Validation of Product / Process – Process Source shall:

a. Establish and maintain a documented procedure for inspection and test activities that verify product / process compliance with specifications.

b. Inspect the product / process to ensure compliance to the purchase order / contract, drawing and specifications.

c. Ensure inspection activities are traceable to the individual performing the acceptance.

d. Ensure that data in said reports are acceptable per applicable specifications when certification test reports are utilized to accept material.

e. Establish appropriate controls for the media where operation acceptance media are used (e.g., stamps, electronic signatures, etc.).

1.9. Control of Inspection, Measuring, and Test Equipment – Process Source shall:

a. Establish and maintain a documented calibration system to control, calibrate, and maintain all inspection, measuring, and test equipment that can affect product quality, including test software and personally owned equipment, and customer supplied equipment.

b. Ensure calibrations are traceable to internationally or nationally recognized standards. Ensure calibrations are traceable to internationally or nationally recognized standards.

c. Document the basis used for calibration where no such standards exist.

d. Identify equipment requiring calibration with suitable indicators / decals. If decal cannot be placed on equipment, the process source shall have an approved identification record of the calibration status.

e. Assess the validity of previous inspection results when equipment is found to be faulty or out of calibration and shall recall the product for re-inspection when the assessment indicates the result may be a nonconforming product.

1.10. Control of Nonconforming Product – Process Source shall:

a. Establish and maintain documented procedure for the identification, documentation, evaluation, segregation and for notification to customer of a nonconforming product.

b. Evaluate each nonconformance for its potential to exist in previously produced Items and notify purchase order holder and assigned Special Process Quality Engineer, in writing, within 24 hours of potential or verified non-conformances on Items in transit or delivered. Notification shall include the concise description of discrepancy, parts and serial numbers affected, lot numbers, delivered quantities, and delivery dates.

c. Maintain records of all nonconforming material, assignable causes, corrective actions, and effectiveness of corrective actions for the contractual period specified.

d. Ensure disposition authority is limited to rework to engineering, or return to customer.

1.11. Corrective Action – Process Source shall:

a. Establish and maintain a documented procedure for implementing corrective action.

b. When written corrective action is requested, ensure the response addresses immediate containment / correction of the discrepancy, root cause, root cause correction, corrective action verification plan, and follow-up.

c. Determine, collect and analyze corrective action data to evaluate the effectiveness of the corrective and preventive actions taken. When requested, the Process Source shall provide root cause trend data.

1.12. Handling, Storage, Packaging, Preservation and Delivery – Process Source shall:

a. Establish and maintain a process for handling, storage, packaging, preservation, and delivery of a product to prevent damage or deterioration.

b. Establish a Foreign Object Damage / Debris (FOD) program in compliance with NAS-412 in order to prevent, detect and remove foreign objects throughout all processes.

1.13. Control of Quality Records - Process Source shall ensure Quality records are:

a. Maintained to demonstrate conformance to specified requirements and the effective operation of the quality system.

b. Retained as specified by contract and customer requirements.

c. Available for customer and regulatory agency examination at no increase in price, cost or fee to the Buyer.

d. Traceable to the original material manufacturer.

1.14. Internal Audit - Process Source shall:

a. Schedule, perform and document audit results which include its quality procedures and records in order to determine the effectiveness of its quality management system.

b. As appropriate, the audits shall be performed by personnel independent of the function being audited.

External Provider Quality Requirements

QCS-001 Processing Sources

1.15. Training - Process Source shall:

a. Ensure personnel receive training and have experience commensurate with the requirements necessary for the performance of contracts.

b. Training records for personnel performing special process activity, inspection and testing shall be maintained.

2. CUSTOMER DEFINED REQUIREMENTS

2.1. Language - Process Source shall:

a. Unless otherwise authorized by Buyer in writing, all records, reports, specifications, drawings, process procedures / instructions, work instructions and other documentation shall be made available in written format in English.

2.2. Certified Materials - Process Source shall:

a. Establish and maintain controls to prevent the use of non-certified materials, expired time-sensitive materials and materials which have exceeded temperature requirements when certified materials (i.e. EMAP) are required.

2.3. Quality System Changes and Relocation - Process Source shall:

a. Notify Buyer's Special Process Quality Engineer, in writing, within 10 days of any of the following:

1. NADCAP accreditation is withdrawn expires, failed audit or scope of accreditation is changed.
2. Process Source, Process Source's sub-tiers are disapproved by a Government Agency.
3. Change in key personnel, including those who have been granted access to Lockheed Martin Aeronautics on line systems.
4. Government/Industry Data Exchange Program (GIDEP) Alert is required or received affecting Buyer Items.
5. Change in its quality system status.
6. Loss of third party registrar's certification status.
7. Adverse action taken by External Provider's customer, the Government, the Federal Aviation Agency, the Civil Aviation Agency, the Environmental Protection Agency or Occupational Safety and Health Administration.

b. Adverse actions include, but are not limited to, any of the following:

1. Issuance of any Level II or Level III Corrective Action Request (CAR) associated with Buyer Items, Quality Management System or processes associated with Buyer Items.
2. Issuance of a major finding by a Third Party Registrar, or Change in External Provider's quality organization, processes or procedures that are known to affect or could potentially affect conformity of any Item.

c. External Provider shall provide within 30 days of the written notification the approved corrective action actions taken or planned actions related to any events listed in 2.3.1.1 through 2.3.2.2 above.

d. Process Source shall notify Buyer and Special Process Quality Engineer, in writing, at least 90 days in advance of any sale, relocation (including internal special process equipment relocations), or transfer of Process Source's processing operations. Process Source shall include the following, as a minimum, in the written notification:

1. Purpose of the relocation.
2. Address of the new location(s).
3. Assessment of actual or potential impact to current PO's.
4. Risk mitigation plan to ensure compliance to existing requirements.
5. Master schedule and timeline of relocation activities.
6. Relocation Coordinator/Point of Contact.

2.4. Access to Facilities - Process Source shall:

a. Provide or obtain for Buyer, Buyer's Customers and regulatory agency personnel, access to any and all facilities, including those facilities of Process Source's sub-tier Process Source(s), where work is being performed or is scheduled to be performed.

b. Process Source shall include the provisions of this facility access requirement in its POs with its sub-tier processors.

c. Work under the requirements of QA022-02 is subject to Buyer's periodic surveillance / audit of Process Source facility or sub-tier Process Source(s) facility.

External Provider Quality Requirements

QCS-001 Processing Sources

2.5. Purchase Order Flow-Down Requirements - Process Source shall:

a. Ensure all sub-tier Process Source(s) purchase orders and/or associated purchase order documents for Buyer controlled processes include the following data elements:

1. Process Source's unique LM Aero identification number ("vendor code") and all LM Aero unique "process codes" for each Buyer-controlled process to be performed.
2. A statement with the words, "Processing to be accomplished in performance of this purchase order is directly related to a Lockheed Martin purchase order and must be accomplished in accordance with process specification(s) on this purchase order and Lockheed Martin QA022-02".
3. A statement that sub-tier Process Source must file and maintain a copy of all purchase orders containing the above statement and make these available for review by Buyer, upon request.
4. A statement that sub-tier Process Source must submit a Certificate of Conformance (C of C) with a unique certification number in accordance with section 2.6 Certificate of Conformance.
5. A statement requiring sub-tier Process Source to identify specification(s) title, specific revision level(s) and drawing(s) requirement(s) to be performed by a QCS-001 source.

2.6. Certificate of Conformance (C of C) Requirements - Process Source shall:

a. Prepare a Certificate of Conformance (C of C) asserting that the Items contained within this shipment are in total compliance with the requirements of this PO. A copy of the C of C shall be included in the delivery package, with process specification exceptions (e.g. pre-clean, stress-relief/bake, etch, etc.) annotated on the C of C.

b. The Process Source C of C prepared for each shipment shall include the following data elements / information:

1. Title, specification number (including revision letter) and QCS-001 process code of the process.
2. Name and address of the process facility.
3. Buyer's assigned processor number.
4. Date the C of C was issued.
5. Purchase order and purchase order part number.
6. Quantity of parts (to include quantity accepted/ rejected).
7. Signature and title of authorized quality agent of Process Source.

External Provider Quality Requirements

QCS-001 Processing Sources

8. Fracture durability classification or serialization per customer PO.

2.7. Records - Process Source shall:

a. Maintain complete records of all processing, inspection and test, including copy of C of C. Upon request, Process Source shall forward specific records to Buyer at no additional cost, price, or fee to Buyer. For at least seven (7) years after completion of each PO or longer if otherwise required by customer's PO, Process Source shall maintain and provide to Buyer upon request, records of all QCS-001 process control tests performed by Process Source, and inspection records of processed Items. For Fracture Critical parts, records shall be maintained for the life of the program.

b. Process Source ceasing business operations shall contact their assigned Special Process Quality Engineer so arrangements can be made to transfer the Buyer records to Lockheed Martin Aeronautics Company.

2.8. QCS-001 Quarterly Usage Report - Process Source shall:

a. Submit a quarterly Usage Report on each Buyer-approved process performed for Buyer and submit it to Buyer at: http://www.lockheedmartin.com/us/aeronautics/materialmanagement.html. Select "Quality Requirements > Supplier Quality Management System > QCS-001 Directory.

b. Instructions shall be used and can be found within the QCS-001 Directory site under "QCS-001 90 Day Usage Reporting". Once log-on credentials are issued, system passwords shall be maintained.

c. The usage report must include all special processing activity which has been subcontracted by Process Source's sub-tier manufacturing sources.

d. Process Source shall submit the quarterly Usage Report within fifteen (15) calendar days after the end of each calendar quarter. Additionally, Process Source shall select "Submit – No Processing Performed" if no QCS-001 were performed or sources utilized during a calendar quarter. Usage Reports shall not be input prior to the end of each calendar quarter.

2.9. Minimum Processing Instructions and / or Planning Requirements - Process Source shall:

a. Utilize written instructions for all manufacturing, processing and inspection operations. Instructions shall be in the form of planning, manufacturing operation sheets, shop orders, travelers or any other identifying document. Such instructions shall identify, in sufficient detail all operational steps, (in sequence), tank numbers, controls, conditions and materials necessary to demonstrate

compliance to all engineering, technical and quality requirements of manufacturing peculiar to the Item being processed.

b. If a numerical controlled (NC) or automated type systems are used the Process Source shall a configuration control system in place and a method to validate the system operates properly.

c. The Process Source shall ensure all planning includes, at a minimum, the following items as applicable:

   1. Item (part) number
   2. Material Type
   3. Heat Treat condition
   4. Shop traveler / planning router number
   5. Identification of the employee performing the work
   6. Quantity of parts (to include quantity accepted/ rejected)

d. The Process Source shall ensure all elements of processing instructions, planning and/or logbook recordings will be available for Buyer review.