

## **QC 7.4.2 Purchase Order Quality Clauses**

### **1. SCOPE**

This document applies to material procured with source controlled information (i.e., drawings, specifications, work instructions, and etc.) provided by PARPRO Technologies (PTI). This document does not apply to Commercial-off-the-shelf (COTS) or standard-off-the-catalog materials.

### **2. QUALITY CLAUSE APPLICABILITY**

- Quality Clauses QC1 through QC13 apply to all purchase orders.
- Quality Clauses QC14 through QC21 apply when specified on purchase order.
- Exception or waiver to the requirements shall be reviewed and agreed by PARPRO

### **3. QUALITY CLAUSE DEFINITION**

#### **QC1 Quality System Requirements**

Supplier shall implement and maintain a quality management system that complies with ISO 9001, ISO 13485, AS9100, or an equivalent system that provides adequate assurance to verify that the product supplied is in full compliance with the purchase order requirements and all applicable specifications. Compliance with these requirements is subject to audit by PTI. The supplier shall flow down to sub-tier suppliers the applicable requirements contained in the PTI purchasing document / specs, including key characteristics where required.

#### **QC2 Qualification of Personnel/Training/Awareness**

Supplier shall

- Provide adequate and competent resources, appropriate for all required activities including line operators, engineers, and support personnel.
- Ensure all personnel are trained and qualified to adequately perform their assigned responsibilities.
- Have a system to prevent untrained or uncertified employee performing the tasks.
- Ensure that relevant personnel are aware of:
  - their contribution to the product conformity and safety;
  - the importance of ethical behavior.

#### **QC3 Right of Access**

PTI, PTI's customer, or applicable Regulatory Agency Representative shall have access to perform quality audits and inspection surveillance. Supplier shall provide necessary quality records and support upon request. Right of Access shall be applicable to all levels of the supply chain involved in the order.

#### **QC4 Traceability**

Traceability and inspection records shall be available upon request by PTI or PTI's customer. Identification shall include, as applicable, but not limited to, the following types of information:

- Lot number and/or date code

- Serial number (if applicable)
- Specification
- Material type

**QC5 Nonconforming Product**

Supplier shall

- Promptly notify the PTI of any nonconforming product that may have been previously delivered.
- Notify PTI prior to any "use as is" or "repair" dispositions of non-conformances pertaining to the purchase order. PTI approval is required for "use as is" or "repair" dispositions.
- Reference the original PTI rejection documentation on the shipping document for any previously rejected items that have been reworked, replaced, or repaired.

**QC6 Supplier Corrective Action**

Supplier shall provide corrective/preventive actions to prevent recurrence for nonconforming material rejected by PTI. Corrective action measures shall include: a determination of the root cause of the discrepancy, determining and implementing corrective/preventive actions, and evaluation of the effectiveness of actions taken.

**QC7 Certification of Compliance**

Certification documents are required and the certification shall include the following:

- PTI purchase order number and item number
- Quantity
- Lot and or S/Ns as applicable
- Date of Manufacture
- Part Number and Revision as specified on purchase order
- Signature, Title, and Date by an authorized representative of the company

**QC8 Change Notification & Authority**

Supplier shall notify the buyer immediately of any changes to the characteristics or configuration of the product and/or processes used to manufacture the product. When required, PTI shall approve the change prior to implementation.

**QC9 Packaging/Handling**

Product intended for delivery to PTI shall be handled and packaged to:

- Prevent damage during handling and transit
- Prevent ESD damage during handling (when applicable)
- Comply with packaging requirements specified by PTI (when provided by PTI)

**QC10 First Article Inspection (FAI)**

Supplier shall perform FAI for the first production units manufactured. The FAI report shall include all drawing characteristics notes, tolerance range, actual measurement results, test results (when applicable), and raw material certification (when applicable).

**QC11 Quality Records**

Quality records must be legible, reproducible, and identifiable to the purchase order. Quality records shall be stored and maintained in such a way that they are readily retrievable and maintained in a suitable environment to minimize deterioration, damage or loss. This requirement must be flowed down to sub-tier suppliers. Retention period for Quality records is Seven (7) years unless otherwise specified.

**QC12 ESD Control**

When handling ESD sensitive materials, supplier shall maintain an Electrostatic Discharge Control program that meets the requirements of ANSI/ESD S20.20.

**QC13 Contingency Plan**

Supplier should have a contingency plan to minimize production disruption due to unexpected events. The plan should address issues related to key production equipment, facility, utility, and labor. Pandemic awareness should be part of the plan to address the loss of labor capacity due to high percentage of absentees. Business contingency plan should be established for major events that can cause extended period of show down.

**QC14 Control of Critical Processes**

A critical production process is one whose integrity cannot be assured by typical inspection / verification methods. Integrity is assured by controlling process parameters. Supplier shall demonstrate control over these processes to provide assurance that specifications are complied with. Copies of critical process procedures and training certifications shall be supplied to PTI upon request. If the supplier outsources the critical process, the sub-tier supplier is subject to the same conditions stated herein.

**QC15 Source Inspection**

PTI Quality Assurance or PTI's customer may perform inspection at the supplier's facility prior to shipment. Supplier shall support PTI or PTI's customer for onsite inspection.

**QC16 Special Requirements**

PTI flows down any special requirement when it's determined to be related to the supplier. The supplier shall take appropriate action to ensure the requirements are met.

**QC17 Key Characteristics**

Supplier shall validate Key Characteristic identified on drawings, PO's, or the acceptance documentation. Measurement data shall be provided to PTI with each shipment.

**QC18 Statistical Process Control**

When appropriate, Statistical Process Control (SPC) techniques must be used for monitoring Key Characteristics.



**QC19 Production Control**

Supplier shall use the latest revision of all documents (drawings, specs, process requirements) during manufacturing. For any outsourced process, the same requirements shall be flown down.

**QC20 Test Reports**

Supplier shall provide test report for each part supplied to PTI. The report shall not be changed, altered, or modified without full traceability to the changes.

**QC21 Foreign Object Debris (F.O.D.)**

Supplier shall employ appropriate housekeeping practices to assure timely removal of residue/debris generated, if any, during manufacturing operations. Supplier shall determine the need for, and implement, FOD prevention awareness training programs.

**QC22 First Article Inspection (FAI)**

FAI inspection per AS 9102 is required on the first lot of material delivered. Material & processing certifications shall be supplied with the First Article Report.

**Revision History**

Date	Rev	Change description
09/27/12	001	Initial release
10/16/12	002	Minor updates
10/25/16	A	Change company name and logo. General update to include scope and applicability
03/10/17	B	Add awareness for QC2; Add QC13, contingency plan; Add QC16, special requirements