

1.0 Purpose

To outline Insitu's quality management system requirements for suppliers.

2.0 Scope

This document applies to suppliers and subcontractors that provide products and/or services that affect the final product or the product realization process. These requirements are in addition to the standard Insitu Purchase Order Terms & Conditions.

3.0 References

3.1 Standards

- 3.1.1 ISO 9001 Quality Management Systems - Requirements
- 3.1.2 AS9100 Quality Management Systems – Requirements for Aviation, Space and Defense Organizations
- 3.1.3 AS9102 Aerospace First Article Inspection Requirement
- 3.1.4 AS5553 Fraudulent/Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition
- 3.1.5 ISO 9000 Quality Management Systems — Fundamentals and vocabulary
- 3.1.6 Federal Acquisition Regulation (FAR) 2.101 Definitions “Commercially available off-the-shelf (COTS)”
- 3.1.7 ANSI/ESD S20.20 Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices)
- 3.1.8 IPC-A-610 Acceptability of Electronic Assemblies
- 3.1.9 IPC-WHMA-A-620 Cable and Wire Harness
- 3.1.10 NADCAP Certification - (National Aerospace and Defense Contractors Accreditation Program) Special Process Certification

3.2 Insitu documents

- 3.2.1 PUP-73-001 Supplier Requests for Engineering Assistance (SREA)
- 3.2.2 PUF-83-001 Supplier Request for Nonconforming Material Form (NCFM)
- 3.2.3 PUI-83-001 Supplier Request for Nonconforming Material
- 3.2.4 ENI-73-007 Part Marking and Serialization
- 3.2.5 ENI-73-003 Product Finish Specification

NOTE: Documents and Forms referenced in this document will be made available electronically to suppliers. Standards are copyright documents and as such need to be purchased from the standards organizations directly.

4.0 Definitions

- 4.1 **Certificate of Conformance (CoC)** – A document certified by the original manufacturer that the supplied material, part or service was made/delivered and tested in accordance with required specifications.

5.0 Supplier Requirements

- 5.1 Suppliers shall ensure that raw materials, parts and services conform to required specifications outlined in:
- 5.1.1 Purchase Orders
 - 5.1.2 Contracts
 - 5.1.3 Product definitions outlined in drawings, functional product specifications, functional test requirements and any other applicable requirements provided by Insitu's authorized procurement representative.
- 5.2 Suppliers shall establish and maintain a documented quality management system (QMS) that is compliant with ISO 9001:2008 Quality Management Systems - Requirements.
- 5.2.1 Fundamentals and vocabulary of the QMS shall be interpreted in accordance with:
 - 1) ISO 9000 Quality management systems — Fundamentals and vocabulary.
 - 2) FAR 2.101 Definitions "Commercially available off-the-shelf (COTS)".
 - 5.2.2 Suppliers are responsible for flowing product requirements to their supply base and controlling the quality of materials, parts and services received from their sub-tier suppliers.
- NOTE: Suppliers are responsible for the quality of all products purchased from sub-tier suppliers, including sources designated by Insitu.**
- 5.2.3 Suppliers shall accommodate requests for on-site audits and completion of quality surveys of their quality management systems.

5.3 Certificate of Conformance (CoC) Requirements

- 5.3.1 CoC shall contain:
- 5.3.1.1 Statement that the supplied material, part or service was made/delivered and tested in accordance with required specifications and provides for traceability back to the source for all Special Requirements.
 - 5.3.1.2 Part number and revision.
 - 5.3.1.3 Serial number or lot numbers, as applicable.
 - 5.3.1.4 Manufacturer name.
 - 5.3.1.5 Supplier contact information.
 - 5.3.1.6 Signed and dated by an authorized representative of the manufacturer.

- 5.3.1.7 Stated adherence to AS5553 Fraudulent/Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition, for electronic components / assemblies, when applicable.

5.4 Communication

NOTE: Insitu is committed to building strong supplier partnerships. This section provides instructions for suppliers to be able to communicate effectively with Insitu.

- 5.4.1 Official communications shall be conducted with Insitu's Authorized Procurement Representative.
- 5.4.2 **Supplier shall notify Insitu of:**
- 5.4.3 Changes to their quality management system and/or their Quality Management representative, and the effective date of the change.
- 5.4.4 Changes in their manufacturing process that require a first article inspection and the effective date of the change, e.g. move of equipment, move of manufacturing facility, and change in manufacturing process. Reference AS9102 Aerospace First Article Inspection Requirement paragraph 5.3.
- 5.4.5 Nonconforming product before delivery and shall obtain Insitu's documented approval to ship the material/product using PUF-83-001 Supplier Request for Nonconforming Material Form.

NOTE: PUI-83-001 Supplier Request for Nonconforming Material outlines the requirements for submitting an NCMR.

- 5.4.6 Nonconforming product detected after delivery.
- 5.4.7 **Additional Communication**
- 5.4.8 Respond to Supplier Corrective Action Request (SCARs) in accordance with the documented request.
- 5.4.9 Supplier may recommend design/process changes to Insitu using the PUP-73-001 Supplier Requests for Engineering Assistance (SREA). Approval shall be obtained in writing from Insitu before implementing changes.

5.5 Records

- 5.5.1 Supplier shall maintain all material and product related records required by Insitu for a minimum of 3 years after final payment.
- 5.5.2 Records are required to identify the product, service, person, dates, and event to which they pertain.
- 5.5.3 Records shall be readily available for review by Insitu within 24 hrs of request and be stored in a manner to protect them from deterioration, damage and loss.

5.6 Documents

- 5.6.1 All documents required by Insitu shall accompany the product at the time of delivery.
- 1) Certificate of Conformance (CoC).

- 2) Documentation proving all inspections and functional testing met specified acceptance criteria.
- 3) Repair documentation with any reworked/repaired material.
- 4) Documentation required on purchase orders.

5.7 First Article Inspection

5.7.1 Suppliers shall use a representative item from the first production run of a new part or assembly to verify that their production processes, production documentation and tooling are capable of producing parts and assemblies that meet Insitu's requirements.

NOTE: Reference AS9102 Aerospace First Article Inspection Requirement.

5.7.2 This process shall be repeated when changes occur that invalidate the original results, e.g. engineering changes, manufacturing process changes, tooling changes, facilities relocations.

5.7.3 Supplier is responsible for flowing down product requirements and managing sub-tier supplier first article inspections, FAI records and reporting.

5.7.3.1 Sub-Tier supplier FAI reports shall be readily available and delivered to Insitu upon request.

5.8 Workmanship

NOTE: Refers to the quality of the work performed on the product and shall be interpreted in accordance with the following:

5.8.1 Electrostatic Discharge (ESD): Protect all ESD sensitive products and components in accordance with ANSI/ESD S20.20.

5.8.2 Electrical / Electronic assemblies:

5.8.2.1 Ensure that electrical/electronic assemblies are compliant with IPC-A-610 Acceptability of Electronic Assemblies.

5.8.2.2 Ensure that electrical/electronic assemblies comply with AS5553 avoidance of counterfeit or fraudulent parts.

5.8.3 Special Processes: Perform special processes in accordance with NADCAP requirements or other Industry Standards.

5.8.4 Cables/Wire Harnesses: Ensure that cables/wire harnesses are compliant with IPC-WHMA-A-620 CABLE AND WIRE HARNESS.

5.8.5 Part Marking and Serialization: Identify parts in accordance with ENI-73-007 Part Marking and Serialization.

5.8.6 Product Finish: Ensure that parts are compliant with ENI-73-003 Product Finish Specification.

5.9 Product Preservation

5.9.1 Preservation applies to raw materials, component parts, assemblies and services that affect the final product and shall have provisions as applicable for cleaning,

prevention, detection and removal of foreign objects, special handling for sensitive products and HAZMAT, marking and labeling and shelf life / stock rotations.

- 5.9.2 Product and raw material shall be protected from damage during all stages of internal processing and delivery.
- 5.9.3 Supplier shall implement methods of handling product and raw material that prevent damage, deterioration and use of expired materials.
- 5.9.4 Product and raw material in storage shall be assessed at appropriate intervals in order to detect deterioration and prevent the use of damaged or expired materials.

NOTE: Supplier storage should have physical security and control of environmental conditions, e.g. temperature and humidity. Apply adequate FIFO for shelf-life items to prevent use of expired materials.

- 5.9.5 Supplier is responsible for packaging products to assure its proper condition and quality upon delivery to an Insitu-specified destination. Packaging shall not be a source of contamination.

6.0 Revision History

Document Revision History			
Rev	Date	Description	Author
9	08/27/12	Complete rewrite of requirements to streamline document. Include references to industry standards.	Dan Gardner, Ellen Shimada, Susan Baker, David Ooms, Patti Sherwin
10	07/22/2013	Update to reduce paperwork that accompanies product, added CoC definition and reference to AS5553 counterfeit parts	Dan Gardner, Patti Sherwin, Susan Baker, Ellen Shimada, Wendy Viehmann
11	02/25/2014	Added use of PUF-73-002 Supplier Request for NCM form in sec 5.4.5 and approval for SREA in sec 5.4.9.	Patti Sherwin
12	06/24/2014	Included reference to PUI-83-001 Supplier request for NCM work instruction in sec 5.4.5 and changed document number PUF-73-002 to PUF-83-001. 5.7 Updated section to include reference to AS9102. 5.9 Updated, expanded requirements for product preservation.	Audrey Dickenson, Susan Baker Patti Sherwin
13	10/23/2014	Added FAI requirement for facilities relocations, and Sub-Tier FAI report management.	Patti Sherwin