1. PURPOSE

1.1 This document established product assurance requirements for all supplies ordered under the Purchase Order, of which this Form is part, to assure that such supplies conform to the required levels of quality and reliability. It is noted that supplies purchased on this order are intended for use in applications, such as Aerospace, that require a high level of quality, traceability and reliability.

2. APPLICABILITY

2.1 **General Requirements** – Unless expressly excluded on the Purchase Order, the General Requirements defined in Section 4 apply only when specifically called out by the appropriate clause number on the Purchase Order.

2.2 **Reference Documents** – Other specifications and documents, either Industry or Government are considered part of the General Purchase Order Requirements, when such specifications are defined on the Purchase order or referenced on drawings or specifications applicable to the Purchase Order. Unless otherwise specified, the revision in effect on the date of the order of such specifications shall apply.

3. DEFINITIONS

3.1 **Purchase Order** – Means the order, subcontract or written agreement with the Seller (External Provider), in which the general and special requirements of this document are incorporated by reference.

3.2 **Purchase Order Clause** – Means the clause(s) describing the general and special requirements (conditions) of purchase as listed in this document.

3.3 **Supplies** – Means the items, products, articles, materials, parts, assemblies, sub-assemblies, systems equipment data, work or services to be furnished by the seller under the Purchase Order to the Buyer.

3.4 **Seller** – Means the legal party (firm, vendor, External Provider or subcontractor) which is the contracting party with the Buyer with respect to the Purchase Order.

3.5 **Buyer** – Means the Precise Aerospace Manufacturing (PAM) acting by and through its Division issuing and administering the Purchase Order.

3.6 **Safety Data Sheet (SDS)** - A Safety Data Sheet (formerly called Material Safety Data Sheet) is a detailed informational document prepared by the manufacturer or importer of a hazardous chemical. It describes the physical and chemical properties of the product.

4. GENERAL REQUIREMENTS

4.1 **Prohibited Practices** – The following acts or practices are typical of those prohibited:

a) Unauthorized Repairs – Repairs by welding, brazing, soldering, plugging, brushing or use of paints, adhesives or plating, or any other method, on parts damaged or found to be faulty during fabrication process, or on defects in castings or forgings, are prohibited unless specifically authorized by Buyer in writing.
b) Unauthorized Processing – Seller shall not change, add or delete any process, material or procedure without prior Buyer **written** approval if such process, material or procedure was originally subject to approval by the Buyer. As to any product which has been subjected to Buyer or Government specified qualification procedures to qualify the product or to permit the Seller to become a qualified source for the product, the Seller shall not change, add or delete any process, material or procedure from that used to qualify the product without prior notification to Buyer and written approval by Buyer or the Government as applicable.
c) Disregard of Approvals – Seller shall not change or delete any quality control procedure or process that is subject to specific approval by Buyer without prior approval of Buyer in writing.
d) Improper Re-submittal – Supplies rejected by the Buyer and subsequently re-submitted to the Buyer shall be clearly and properly identified as re-submitted supplies. Seller's shipping document shall contain a statement that supplies are either "replacement" or "reworked" supplies and shall refer to Buyers' rejection document number.
e) Unauthorized Submittal of Production Parts – When the Purchase Order requires Buyer acceptance of First Article prior to delivery, Seller shall not submit articles from a production run prior to Buyer's approval of First Article unless authorized by Buyer in writing.
f) Notification of Facility Change – Seller shall not relocate any production, manufacturing and/or processing facilities, or transfer work between Seller's facilities, during performance of the Purchase order, without promptly notifying Buyer and affording Buyer and opportunity to examine such facilities for compliance with required Quality requirements, including any necessary approvals.

4.2 **Responsibility for Conformance** – Neither audit, surveillance, inspection and/or tests made by the Buyer or his representative at either the Seller's or Buyers facility, nor the Seller's compliance with all applicable Product Assurance Requirements shall relieve the Seller of the responsibility to furnish supplies which conform to the requirements of the Purchase Order.

4.3 **External Provider Performance Rating** – All product related external provider is subject to quarterly rating. The buyer expects rated external provider to achieve a 95 % score or corrective action may be initiated to drive improvement. The quarterly External Provider rating is based on quality, on-time delivery and quantity of product shipped.

4.4 **Proprietary Product Control** – The Seller shall notify the Buyer, in writing, of any changes in product design, fabrication methods, materials, or processes of proprietary products, and shall obtain the Buyer's approval prior to implementing such changes. In the event of Buyer approval, Seller shall identify those products on which the change(s) is incorporated and furnish the applicable revised specifications, drawings and/or catalogues with the initial shipment of the changed product(s) on the Purchase Order.

4.5 **Documentation**

a) Certifications/Documents – Seller shall furnish all certifications/documents required by the Purchase Order whether specified directly on the Purchase Order or specified by reference to the clauses herein.
b) Sub-Tier Certifications/Documents – Seller is responsible for obtaining, identifying and furnishing certifications/documents from his (sub-tier) external provider when such certifications/documents are required by the Purchase Order. Prior to submittal, the Seller shall reference on such sub-tier certification/ documents, the purchase order number and item (part, process, material, etc.) for which the certification is supplied.
c) Buyer Acceptance – The buyer may refuse to accept supplies delivered under the Purchase Order if the Seller fails to submit the certifications/ documents, test data or reports required by the Purchase Order and/or the requirements specified herein.

4.6 **Lot Sampling** – The Buyer reserves the right to use ANSI Z1.4 equivalent sampling plan for the acceptance or rejection of supplies.

4.7 **Quality Records -** All quality records, including radiographic film, shall be retained for a period of 11 years. Records shall be made available within two business days of the request for access. Records shall be stored in a manner that prevents loss, damage or deterioration. Electronic data shall be stored and protected by back-up procedures.

4.8 **Corrective Action Requests** – When a quality problem exists, the Buyer will request corrective action from the Seller. Such requests require timely responses and should include the following information: (a) analysis of the cause of the problem, (b) statement of the action taken, and (c) the affectivity of the corrective action. When the corrective action is required for Government Source inspected items, Seller shall coordinate such action with the Government Quality Assurance Representative assigned to his plant.

4.9 **Access to Facilities**

Buyer – Buyer may, at its discretion, provide authorized personnel whose function shall be to survey Sellers operations, assist the Seller in resolution of Quality problems, and witness at

any stage (subject to proprietary considerations), the manufacture, processing, test or inspection if items being manufactured for Buyer and its customers (and the Government or any regulatory agency if any items are intended for Government end use). The scope of the Seller's operations, as well as the volume of work being performed for the Buyer, will determine in part the need for surveillance by Buyer's authorized representative(s). Copies of all applicable specifications, documents and records as well as assistance and access to all places at reasonable times shall be made available to Buyer's authorized representative(s).

Government – On items intended for use in Government contracts, the access to Seller's facilities as defined above shall be made available to authorized Government representative(s) upon request.

4.10 **Preservation and Packaging** – The following requirements apply only when specific preservation and packaging instructions are not invoked by the Purchase Order.

a) All supplies intended for delivery on the Purchase Order shall be protected against the usual hazards of corrosion, contamination, deterioration or other spoilage at the Seller's facility and prior to delivery.
b) All supplies delivered on the Purchase Order shall be packed with suitable protection to prevent corrosion, contamination, deterioration, spoilage or handling damage during transit and while in storage prior to use.

5.0 PURCHASE ORDER CLAUSES

The following special product assurance requirement clauses are applicable to the Purchase Order only when specifically called out by the clause numbers on the Purchase Order.

Q1 No Quality Requirements Apply (Non-product Related Items)

Q2 Quality System Per ISO 9001 or AS9100 & Calibration Systems Requirements

The Seller's or AS9100 Quality system shall minimally comply to the requirements of the current revision of ISO 9001. The Buyer's preference is that the Seller's quality system is certified to the current revision of ISO 9001 or AS9100.

The **calibration system** shall be in accordance with documented standards such as ANSI Z-540.3, ISO 10012 or ANSI/ISO 17025. The External Provider is responsible for the calibration, accuracy, validation and maintenance of any equipment, tooling, or gages utilized to produce, inspect, or test articles to be delivered in the purchase order

Q3 **Limited Shelf Life Materials** – Seller shall show on each container of materials having a limited or specified shelf life (both Seller's in-plant containers and containers in which material is delivered to Buyer) the cure or manufacture date, expiration date, lot or batch number and special storage and handling conditions applicable to the contents: this information shall be in addition to the normal identification requirements of name, part or code number, specification number, type, size, quantity, etc. Special handling conditions shall be recorded on certifications and shipping documents covering the material as delivered to Buyer, in addition to normal identification information. Product shall have at a minimum of 75% of the shelf life remaining when product is received.

Q4 **Material Traceability, Identification and Control** – The Seller shall provide positive traceability of each part (and serial numbers, if applicable) of the material certifications/test reports of the specific raw material from which it was manufactured. Traceability may be provided by identifying individual parts with the producers' heat lot number, batch or melt or a unique identifier assigned by Seller and cross referenced to the material certifications/test reports. Parts with insufficient surface for marking may be packaged in separate lots and identified with lot numbers on unit packages on attached tags.

Q5 **Certificate of Conformance** – The Seller shall place on (or on a separate document attached to) his packing sheet/shipper covering each shipment of articles, a certificate of conformance worded substantially as follows and bearing in ink the signature and title of Seller's responsible representative.

"This is to certify that all items delivered on this packing sheet/shipper #_____ under Purchase Order #_____ conform to all applicable drawing, specification or purchase order requirements: and any items furnished under this order applicable to a Government Qualified Products (QPL) List or Preferred Parts List (PPL) have been manufactured by and/or procured from a source(s) listed on the QPL/PPL. Objective evidence to support this certificate of conformance is on file and will be made available to the Buyer for review upon request"

Q6 **Material Certifications** – For each lot or heat of material supplied on this order, the Seller shall furnish the latest and dated certified material test report showing the material description, including as applicable, the material name or designation, alloy, type, grade or condition; the producers (mill) name, the lot or heat number, the material specification and **latest revision to which the material complies at the time the PO was awarded**. This may include the reference

to other specification if the PAM requested material specification has been either cancelled or superseded. Traceability to must be maintained.

a) Metallic Materials – Show the actual values of chemical and physical properties obtained from the lot or heat versus values required by applicable material specifications.
b) Non-Metallic Materials – Show the typical range of values of the chemical and physical properties of the material and a statement that the material conforms to the requirements of the applicable material specification.

Q7 **Process Certifications** – For all processes required by the Purchase Order and performed by the Seller or by his sub-tier external provider, the Seller shall furnish the original certification/test report issued by the Seller or his sub-tier External Provider that actually performed the process. The certification/test report shall include a complete description of the process performed (name, applicable process specification, type, class, grade, latest revision, etc.), the quantity and description (part number, revision, name) of its items processed and when applicable a statement that the process was performed by certified operator(s). This may include the reference to other specification if the PAM requested process specification has been either cancelled or superseded. Traceability to must be maintained. The following criteria shall be used to define original certification/test reports:

- Certifications/documents that have been written in ink, typed or typed carbon copies, signed by a responsible official of the issuing organization in ink.
- Computer prepared certifications/documents that have been signed by a responsible official of the issuing organization in ink.
- Reproduced copies of certifications/documents that have been attested and notarized in ink as true copies of the original certifications/documents.
  NOTE: Generally, most special process external provider will provide extra copies of certifications/test reports that meet the above requirements. It is the Seller's responsibility to assure that sufficient copies of such certifications are obtained and available.

Q8 **Chemical Test Report** – Seller shall submit a certified statement of chemical analysis of the material used in the Article showing the percentage of each element contained in the specimen.

Q9 **Functional Test Reports** – The Seller shall furnish the actual test results (data sheets) recording actual readings for all test parameters specified by the drawing specification or purchase order. Test reports must be identifiable with individual item or lot submitted and signed by Seller's authorized representative.

Q10 **Radiographic Film** – Seller shall submit the shooting sketch and exposed film for Buyer's review and approval.

Q11 **Non-Destructive Test Reports** – The Seller shall furnish with each shipment one (1) copy of the certified test report for all NDT test (penetrant, magnetic particle, radiographic, ultrasonic) performed. The report shall be issued by the organization actually performing the tests, include a complete description of the test (test name, specification, type, method, acceptance criteria and the certified technician who performed and/or evaluated the test(s) and shall be signed by a responsible official of the issuing organization. All items subjected to NDT tests shall be identified with the appropriate NDT stamp. When applicable, radiographic reports shall be accompanied by a shooting sketch and the exposed film. When parts are serialized or identified with lot or batch numbers, such identification shall appear on the test reports and exposed film.

Q12 **Final Source Inspection** – Items to be delivered under this Purchase Order require final inspection, tests or surveillance by the Buyer's Quality Representative at the Seller's plant, prior to delivery. When the product is ready for source inspection, the Seller shall notify Buyer's Purchase Department at least 48 hours in advance to permit scheduling of source inspection. Upon request, the Seller shall make available to the Buyer, facilities, equipment and personnel to operate the equipment as required.

Q13 **Government Inspection** – Is required prior to shipment from Seller's plant. Upon receipt of this Purchase Order, Seller shall promptly notify the Government representative who normally services Seller's plant, in order that appropriate planning for Government inspection can be accomplished. If the representative of the Government Inspection Office cannot be located, the Buyer should be notified immediately (minimum 72-hour notification required).

Q14 **First Article Inspection Reports** – Seller shall submit the first article part(s) to the Buyer's receiving inspection department together with documents showing data representing results of Seller's First Article inspection, including actual dimension or value for each specified characteristic. The first article part(s) shall be clearly identified by tagging, serial number, or other positive identification method.

Q15 **Mechanical Inspection Report** – Each shipment shall be accompanied with 1 legible copy of an inspection report. The inspection report shall identify each specification and/or

requirement attribute individually. The report shall identify the purchase order number, and the signature and title of the authorized representative.

Q16 **NADCAP Certification required** – All Special process are required to be performed by an External Provider who is NADCAP certified for that [process. Their certification needs to state that it has been performed by a NADCAP certified processor.

Q17 **Qualified personnel –** Personnel performing the work on this process are required to be certified in their field of expertise.

Q18 **SPC Required –** Statistical process control dimensions need to be tracked on an ongoing basis and capability needs to be shown.

Q19 **Test Specimens –** Test specimens, coupons or color samples are required with each shipment

Q20 **Customer Approved Source –** The External Provider needs to be on the final customers approved source list. This needs to confirmed at time of order.

Q21 **Prevention of Counterfeit Parts –** PAM processors / suppliers of parts and material shall establish and maintain a counterfeit parts prevention and control plan using industry standard AS5553 & AS6174 as applicable.

Counterfeit Part: An unauthorized copy, imitation, substitute, or modified part (e.g. material, component), which is knowingly misrepresented as a specified genuine part of an original or authorized manufacturer.

Note: Example of a counterfeit part can include, but are not limited to, the false identification of marking or labeling, grade, serial number, date code, documentation, or performance characteristics.

Seller shall have a record of a trained employee for the detection and preventing the use of counterfeit parts. Seller must address its employees and their third party engaged in the performance of work, that use of such counterfeit activity will lead them to a risk of penalties, fraud or misrepresentation to the requirement of the order.

- The Seller should notify PAM immediately if they come across of shipping any counterfeit products. If the counterfeit parts have been shipped, then the seller shall replace the product with the genuine parts or material at their own expense.

- Seller must have and maintain the processes to abolish the counterfeit parts proliferation and also their facilities meet the required quality standards and have the required capacity**.**

- Persons doing work under organizations control should be aware of their Quality policy, Relevant objectives, Relevant documented information and changes for product conformity, product safety and importance of ethical behavior.

Q22 **Safety Data Sheets** – SDS's are required for hazardous chemicals/materials. A Safety Data Sheet (SDS) is a document produced in alignment with the UN's Globally Harmonized System of Classification and Labelling of Chemicals (GHS) that the manufacturer, importer, or distributor of a chemical product is required to provide to downstream users.

Revision History

Rev.	Description	Date	ECO	Approved
N/C	RELEASE	5/28/09	N/A	*D. Montgomery*
A	Section 4.7 Quality Records was added. Other subsequent sections in General Requirements had their respective section number changed accordingly.	8/19/09	N/A	D. MONTGOMERY
B	Changed name to Precise Aerospace Manufacturing from Precise Plastic Products	6/10/10	N/A	T. PALMER
C	Added Q Clauses Q16 NADCAP Certification Required, Q17 Qualified Personnel Required at External Provider, Q18 SPC Required, Q19 Test Specimens or Coupons required, Q20 Customer Approved sources required	6/09/11	N/A	W. GOODMAN
D	Added an ECO column	7/22/13	824	L. BROOKES
E	Changed file path to match the new location in folder "Current Documents"	2/2/17	5569	B. PEMBER
F	Changed to meet AS9100 Rev. D requirements, see ECO# 7308	9/26/17	7308	D. PATEL
G	Changed external provider score to 98% and added AS9100 to Q2.	11/10/17	7331	D.GIMONDO
H	Adding New Quality Clause Q21: Prevention of Counterfeit Parts	12/04/17	7425	D.PATEL
I	Revised Quality Clause Q21: Prevention of Counterfeit Parts: Added- Counterfeit Part definition and awareness of person's contribution to product conformity, safety and importance of ethical behavior, Section 4.3: External Providers rating is changed from 98% to a required 95%.	3/15/18	7620	M. Khan
J	1. Revised Quality Clause Q6 & Q7's statement to include request for latest revision, date and certificate 2. Added para 3.6 SDS definition 3. Added Q22 quality clause	03/17/2020	9231	T. OLATUNJI
K	ADDED "TRACEABILITY" TO SECTION 1.1. CORRECTED VERBIAGE IN SECTION 4.4. CHANGED Q6 FROM "FERROUS" TO "METALLIC". CORRECTED FORMAT FOR Q21.	9/9/2020	9600	M. SEYEDNEMATOLLAH
L	UPDATED SECTION 4.7 TO 11 YEARS	1/18/2021	9850	M. SEYEDNEMATOLLAH