Blue Origin, LLC Quality Clauses

The quality clauses listed below are applicable for Blue Origin hardware and material. Questions regarding the clauses or a need to resolve conflicting requirements contained in a purchase contract should always be directed to the Blue Origin Buyer. Quality clauses are only applicable when specified on the PO. These Quality Clauses correlate to CMPM-PR0009-B 11/11/19

QC-001 Certificate of Conformance. Supplier shall submit with each shipment either on their packing list, or attachments, a certificate of conformance or certificate of compliance, which shall be dated and bear the signature and title of an authorized Suppliers Quality Representative, stating that the materials furnished to Blue Origin are in conformance with the applicable requirements of the contract, drawings, and specifications. The Certificate of Conformance shall validate that the form, fit, or function of the part has not changed since the part was purchased. It shall also state that the supporting documentation is on file and will be made available to Blue Origin or any regulatory or statutory agency upon request. An example of an acceptable statement of Certificate of compliance/conformance is as follows: "This is to certify that all items noted are in conformance with the contract, drawings, specifications, and other applicable documentation, and that all process certifications, chemical and physical test reports are on file at this facility and are available for review by Blue Origin". Certification must include the following:

a. The supplier's full name and address

b. Blue Origin purchase order number

c. Blue Origin Part number

d. Blue Origin Drawing Revision Level, as noted on the purchase order. If no revision is noted on purchase order, provide and certify to the latest blue print revision at the time of purchase order placement.

e. Serial numbers (where applicable)

f. Quantity shipped

g. Lot / Date Code / Work Order (if applicable)

h. Authorized signature and date

QC-002 Counterfeit Parts. For purposes of this clause and the definition of Counterfeit Work, 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).

Supplier shall not deliver Counterfeit Work to Blue Origin under this Contract.

Supplier shall only purchase products to be delivered or incorporated as Work to Blue Origin directly from the Original Component Manufacturer (OCM)/Original Equipment Manufacturer (OEM), or through an OCM/OEM authorized distributor. Work shall not be acquired from independent distributors or brokers unless approved in advance in writing by Blue Origin.

Supplier may use another source only if:

- the foregoing sources are unavailable,
- the supplier's inspection and other counterfeit risk mitigation processes will be employed to ensure the authenticity of the work,
- the sub-tier supplier meets applicable counterfeit prevention industry standards and processes (including tests) and;
- Supplier obtains the advance written approval of the Buyer.

Approval to use another source other than defined above requires the submittal of a comprehensive risk mitigation test and inspection plan to the Buyer's Procurement Representative. The risk mitigation plan shall define appropriate tests and inspections, as well as acceptance criteria, to validate the products authenticity. Test results shall be reviewed and approved by the Buyer's Quality Engineering prior to shipping or incorporating into deliverable hardware.

Supplier shall develop and implement a counterfeit product control plan using AS5553 for electronic parts and AS6174 for all other material. The plan shall be available for the Buyer review upon request.

The Supplier's counterfeit avoidance and detection systems are subject to Buyer and/or Buyer's customer audit and approval.

Supplier shall implement systems that assure traceability of all material from the original manufacturer to product acceptance by the Buyer. For electronic parts, Supplier shall have processes that enable tracking from the OCM, OEM or the OCM/OEM authorized suppliers, whether the electronic part is supplied as a discrete electronic part or is contained in an assembly. This requirement applies to all work delivered to the Buyer either directly or indirectly as components or included in assemblies. This entire note, or requirements that meet the intent of this note, shall be flowed down to all sub-tier suppliers under this contract and the Supplier shall provide evidence of compliance to this note upon request.

QC-003 Parts Substitution. Part substitutions are not authorized unless Blue Origin has approved them in writing. The supplier shall notify Blue Origin of any End of Life, obsolete or Form, Fit, or Function issues.

QC-004 Foreign Object Debris (FOD) Prevention and Part Cleanliness. The Supplier shall develop and maintain a Foreign Object Debris/Damage ("FOD") prevention program for manufacturing areas and associated support function areas. The intention is to prevent introduction of foreign objects into any item delivered under this Purchase Order (PO). National Aerospace Standard 412 (NAS 412) is available as a guideline.

The Supplier shall conduct production processes appropriate to prevent, detect, and remove all FOD from product(s) during manufacture and provide parts clean and free of all FOD prior to shipment to Blue Origin. FOD contamination can be cause for rejection of material. If processes are required in a cleanroom environment, cleanroom must be maintained to the required class in accordance with ISO 14644. If any product requires a cleanliness level, the product shall be cleaned to specified cleanliness levels per the latest revision of IEST STD-CC1246.

QC-005 Deliverable Data: First Article Inspection. FAI shall be performed by the Supplier in accordance with the latest revision of Aerospace Standard AS9102. Supplier shall utilize the current AS9102 forms, or equivalent, including:

Form 1 – Part Number Accountability

Form 2 – Product Accountability – Materials, Special Processes and Functional Testing

Form 3 – Characteristic Accountability, Verification and Compatibility Evaluation

Supplier shall be required to perform a new FAI when there is a lapse in production exceeding twenty four (24) months. In addition, any changes or deviations as defined in AS9102 shall require a full or partial (delta) FAI.

The completed First Article Inspection Report (FAIR) shall accompany the product when shipped to Blue Origin.

This note is not applicable to for the standard catalog, MIL-STD, or commercial off-the-shelf parts/assemblies.

QC-006 Deliverable Data. Placeholder

QC-007 Deliverable Data. Nondestructive Test (NDT Report): The Supplier shall provide a copy of an NDT reports (radiographic, ultrasonic, penetrant, etc.) for each item, authorized by a representative of the Supplier's Quality function, with each shipment.

QC-008 Deliverable Data: Dimensions. The Supplier shall provide a final inspection report of critical dimensions that are identified on the engineering drawings and / or specifications in Supplier format, and authorized by a representative of the Supplier's Quality function with each shipment.

QC-009 Deliverable Data. Material Property Test or Material Certification Data: The supplier shall provide the results of any material property test required by the engineering drawing, referenced specification or component specific criteria for each material lot.

QC-010 Deliverable Data: Acceptance Test Procedures (ATP). The Supplier shall generate an ATP for final acceptance testing, to include any revision of the ATP, as well as test programs, software, and hardware. The ATP shall include equipment lists, equipment calibration status, and test procedure and data sheet(s) necessary to verify the functional requirements, weight, and outline of dimensions required by the equipment specification. This ATP and any subsequent changes must be submitted in advance and approved by the Blue Origin buyer prior to testing deliverable end items. The Supplier shall provide final complete detailed ATP data for each item, in Supplier format, and as authorized by a representative of the Supplier's Quality function with each shipment.

QC-011 Deliverable Data. Machined Material Inspection

- Aluminum: Prior to machining Aluminum, supplier shall perform ultrasonic inspection on all aluminum material to ASTM B594, immersion method, 100% coverage, CLASS A and provide inspection documentation to Blue Origin. Material already inspected per ASTM B594 is acceptable as is.
- All Metal except Aluminum: Prior to machining non-aluminum metals, supplier shall perform ultrasonic inspection of raw stock material per AMS-STD-2154, Type 1 or ASTM E2375, immersion method, 100% coverage required. Accept per CLASS A. Supplier shall provide inspection documentation to Blue Origin.

QC-012 Deliverable Data. Chemical Conversion Coating Class 1A: The Supplier shall perform chemical conversion coat per MIL-DTL-5541F TYPE I OR II, CLASS 1A and shall submit documentation to Blue Origin. TOUCH UP PERMITTED.

QC-013 Deliverable Data. Chemical Conversion Coating Class 3: The Supplier shall perform chemical conversion coat per MIL-DTL-5541F TYPE I OR II, CLASS 3 and shall submit documentation to Blue Origin.

QC-014 Deliverable Data – Harness. The Supplier shall take pictures showing the fabrication condition of the harness(es) of the following if applicable to the build: wire termination and connection of connector before installation of backshell/boot, Teflon film applied to cables/wires before EMI overbraid, and depth of potting material in backshell. Pictures to be submitted to Blue Origin with the shipment.

QC-015 Deliverable Data. Intentionally Blank

QC-016 Deliverable Data. Intentionally Blank

QC-017 Deliverable Data. Intentionally Blank

QC-018 Deliverable Data. Intentionally Blank

QC-019 Deliverable Data – End Item Data Package (EIDP). The supplier shall provide an End Item Data Package (EIDP) for product final acceptance and with the shipment. The EIDP shall include at a minimum the following (when applicable):

a. Supplier's Certificate of Conformance

b. Certificate of Compliance/Conformance from sub-suppliers which contain sub-supplier name, location, contract number, part number and revision, and serial number

c. Specification / Drawing number and revision

d. As-built configuration, including a parts list identifying all part numbers, revision, serial numbers (when required), lot numbers, quantities, manufacturer, raw material conformance report, consumed materials, and life limiting information such as shelf life or number of cycles.

e. Proof of compliance to traceability to material lot (serial number, lot number, batch number, software version, heat lot etc.) and any applicable requirements imposed by drawing or specification standards

f. Non-conformances with proof of Blue Origin acceptance

g. Incorporated Engineering Change Notices

h. Type of inspection performed, equipment calibration log, and recorded results

i. All acceptance or Qualification Test data and reports

j. Total quantity of items tested, quantity of items accepted, and quantity of items rejected

k. Recorded Part Mass

l. Applicable GIDEP alerts, waivers, deviations, and incident reports

Blue Origin shall refuse to accept the item if the supplier fails to submit certifications, documentation, test data, or reports specified in the procurement document. Documentation shall include Blue Origin's source inspection if such source inspection is performed.
Written approval shall be obtained from Blue Origin for any deviations to the EIDP.

QC-20 Material Review Authority. The Supplier and/or any of their suppliers/subcontractors do not have authority to process use-as-is, repair, or standard repair procedures via their Material Review Board (MRB) for Blue Origin designed parts or product unless otherwise specified in this purchase order or other contractual documentation.

When a nonconformance is discovered by the supplier, the supplier shall notify the Buyer with the relevant information via the supplier waiver request form or equivalent. Blue Origin will perform the MRB review per our internal processes and procedures. Depending on the risk of the product and the operating environment, Blue Origin may authorize Material Review Authority to the supplier.

Nonconforming Blue Origin designed product may be dispositioned as use-as-is or repair, after review and authorization from the appropriate Blue Origin Responsible Engineer (or designee) and Quality representative. The repair process should be approved in writing by the responsible engineer (or designee) prior to implementation.

The Blue Origin Buyer will notify the supplier of the MRB disposition and next steps. The Buyer must be notified and approve any shipment of nonconforming parts or products.

This MRB authority requirement is not applicable to Commercial off the Shelf (COTS) products or Supplier designed hardware.

QC-021 Electronic Data Transmission. The Supplier shall communicate all data and documentation as specified by general notes, quality clauses, and/or other required documentation electronically. Documents shall be sent via one or more of the following methods:

1. The Blue Origin Supplier Portal.

2. Email to the buyer with Blue Origin Purchase Order number in the subject line. Files should be named as followed: "Part Number_PO Number" (example: 123-034-02_PO1234). Supplier shall attach to the email an individual file for each line item. Documents corresponding to that line item shall be submitted via PDF. Note that all ITAR restricted information must be encrypted and the password supplied separately.

3. FTP Server

QC-022 Change Control Requirements. Some or all of the products acquired under this agreement will be incorporated into higher level assemblies that may be subject to stringent "qualification testing" requirements for critical government applications; even minor changes to Supplier's products or processes may necessitate "requalification" or produce unacceptable results in higher level assemblies. Since the impact of any such product/process change can be most efficiently assessed prior to product integration into higher level assemblies and the potential cost of remediation/retrofit activities for end products deployed worldwide could be substantial, as a cardinal commitment under this contract, Supplier expressly commits to:

1) Maintain a robust sourcing/quality process for the products delivered hereunder;

2) Rigorously comply with the notification requirements specified below; and

3) Include provisions with its sub-tier suppliers that are adequate to implement the requirements of this provision.

For Blue Origin Designed Products:

Prior Approval/Notification – Form/Fit/Function/Material Changes:

* Prior Approval: Supplier shall not implement, or otherwise deliver to Blue Origin, products incorporating any alterations to product form, fit, and/or function without the express prior written approval of the Buyer. Such approval shall not be unreasonably withheld but shall be dependent upon Supplier's thorough documentation of such proposed changes (including any analysis necessary to confirm continued suitability). Supplier's notification and Buyer's limited approval of such form, fit and/or function alterations shall not be interpreted to waive any other contractual requirement(s) or to otherwise relieve Supplier from delivering fully compliant products to Blue Origin documentation.

* Notification: Prior to delivering any products incorporating a "material change", Supplier shall provide advance notice to the Buyer, as they become aware and allow sufficient time to reasonably evaluate the proposed change and, if necessary, to place an end-of-life order for the unchanged products.

* For purposes of this clause a "material change" is any alteration to the design (including Software/Firmware), technical specifications, materials, component sourcing, production process, facilities or location (from original manufacturing location), whether instigated by Supplier or its sub-tier suppliers.

For Supplier Design Authority and COTS Products:

All Changes: Supplier shall notify Blue Origin of changes to form, fit, and/or function that may affect end item performance to products purchased within the last 24 months of the change date. Supplier shall provide notification via a Product Change Notices (PCN) or some other communication method. These notifications shall be submitted to the Buyer as the Supplier becomes aware. Supplier shall also notify the Buyer of any changes that may affect the performance of the hardware.

Risk Notification – Product Alerts: Blue Origin shall be promptly notified whenever the Supplier becomes aware or reasonably suspects that any product delivered to Blue Origin is, or contains a component that is, subject to a recall notice, warning alert, GIDEP Alert, and/or any other type of notification or concern regarding product authenticity, quality, safety, process integrity, and/or specification compliance.

QC-023 Temperature / Perishable / Shelf Life Sensitive Materials. When materials delivered under this purchase order are temperature/shelf life controlled and/or perishable, the Supplier shall provide certifications for temperature, perishable and age sensitive materials (e.g. epoxies, paints, bonding agents, prepregs, adhesives, etc.), which reflect date of manufacture, date of test, shelf life, expiration date, and storage temperature as it applies to each lot/batch. Container

label(s) must also reflect applicable lot/batch number(s), storage temperature, expiration date, and date of shipment. Product delivered to Blue Origin shall have a minimum of 80% remaining of shelf life upon receipt, unless approved by Blue Origin in advance.

When temperature controlled material is involved, the Supplier shall provide material packaging suitable to maintain proper temperature during transportation from their facility to Blue Origin. The Supplier shall provide the necessary temperature measuring equipment to monitor the material during transportation to assure compliance to the specifications of the Purchase Order.

QC-024 Software. Any software used for qualification or acceptance of hardware or software deliverables, including firmware, shall have a system for control including procedures, records and revisions available for review any time upon request from Blue Origin. All software shall be backed up in a supportable format by the Supplier and shall be retained for a time no less than 7 years.

QC-025 Sub-tier Suppliers. The Supplier shall have processes in place to assure full compliance to all quality Purchase Order (PO) notes and requirements applicable to this PO. When products or services applicable to this PO are procured by the supplier from sub-tier suppliers, the supplier shall flow the quality PO note requirements and all other requirements, as necessary, to ensure full compliance is achieved.

QC-026 100% Inspection of Attributes. The Supplier shall perform 100% inspection for all attributes and submit all inspection documentation with appropriate Quality Engineering approval. The supplier may provide attribute data from their sub-tier supplier to demonstrate compliance. Serial numbers and/or lot codes shall be referenced on the inspection documentation.

QC-027 'Critical to Quality' Dimensional Inspection. The Supplier shall perform 'critical to quality' attribute inspection showing acceptable dimensional data and submit all inspection documentation with appropriate Quality Engineering approval. Serial numbers and/or lot codes shall be referenced on the inspection documentation.

QC-028 Sampling Inspection. Sampling inspection may be utilized during performance of this order. Prior to use, the sampling plan must be submitted to Blue Origin Quality Engineering and approved. Blue Origin Quality Engineering will evaluate the risk and determine the appropriate acceptance requirements. The use of sampling inspection in no way affects Blue Origin's right to reject any unit(s) of product found defective.

QC-029 Special Processes. All special processes as identified by Blue Origin engineering and/or the purchase order require NADCAP accreditation or approval in writing by Blue Origin. Certifications for special processes, such as heat-treating, chemical processing, welding, plating, non-destructive testing, Non-Conventional machining, etc., shall be submitted with each shipment and include the specification and revision level.

Special Process Definition - A documented method used to manufacture products where:

> When a product undergoes a physical, chemical or metallurgical transformation or inspection, conformance to the specification cannot be readily verified by normal inspection methods, and the quality of the product depends on use of specific equipment operated in a specific manner, under controlled conditions, by trained personnel with instructions, procedures and standards.

Prior to selecting/using a Nadcap special process supplier, the Supplier and/or sub-tier suppliers shall contact the selected Nadcap special process supplier and confirm that they currently perform the specific Type, Class, Method, etc. per the associated drawing requirements.

If the shipment contains multiple special processed lots within each manufactured lot, each processed lot must be segregated and identified to maintain complete traceability in each shipment. (Example: When a manufacturing work order is split into two separate heat-treated lots, each heat-treated lot shall be segregated and identified to maintain traceability in the shipment). Also refer to QC-034 Traceability for additional requirements.

QC-030 Source Inspection. Blue Origin Source Inspection shall be performed as specified (in-process and/or final). Please notify Blue Origin ten working days in advance of the date source inspection will be required at your facility. A Blue Origin Source Inspection does not preclude subsequent inspection nor does it relieve the supplier of the responsibility of provide acceptable product. Source inspections may include personnel and contractors from Blue Origin in addition to Blue Origin customer representatives and/or regulatory authorities, and shall include access to all records applicable to Blue Origin product or orders.

QC-031 Quality Control System. Supplier shall provide and maintain a quality control system conforming to the requirements of the elements described in SAE AS9100, AS 9120, or ISO 9001. Third party registration by an accredited registrar will be accepted. Supplier declaring system compliance to AS9100 with no formal accredited registrar will be reviewed. The supplier's system will be subject to review and approval at all times by Blue Origin.

All quality records to work performed under this Contract shall be kept complete and available to Blue Origin. Quality records include receiving and inspection records consisting of reports reflecting receipt and inspection of supplies, equipment, and materials, tooling; and production records of processing quality control, reliability, and inspection. The Supplier shall contact Blue Origin for approval prior to disposal of quality records.

Supplier shall notify Blue Origin of any violation or deviation from Supplier's approved quality control system. Supplier shall notify Blue Origin of any work delivered to Blue Origin during the period of any such violation or deviation.
If a non-conformance that affects the part or its performance is discovered by the Supplier prior to shipment that does not affect form, fit, or function, a request for waiver may be submitted. All such requests may be made in writing. Under no circumstances shall shipments be made without written approval from Blue Origin.

QC-032 Calibration. The Supplier shall perform all inspections and tests using calibrated equipment. For calibration service providers or test laboratories, accreditation to ISO 17025 is preferred. Materials used to meet applicable drawing requirement and procurement documents shall not be excluded.

QC-033 Identification/Marking. The Supplier shall identify all items, parts, components, sub-assemblies and/or assemblies as required by the drawing, as specified by the Blue Origin Purchase Order, or per the SAE specification for the product.

QC-034 Traceability. Each manufacturer's lot within each shipment must be segregated and identified to include quantity and lot number on each Certificate of Conformance. There must be a clear link(s) (i.e. heat #, Lot number), that ties the entire certification package together. This includes process certifications performed by sub-tier suppliers. Distributors shall maintain clear traceability to the original manufacturer for each lot in a shipment.