

Quality Assurance Provisions (QAPs) are used to communicate to Suppliers additional requirements beyond those defined by a drawing and/or specification(s). Leonardo Electronics U.S., Inc.'s (LEI) Lasertel Business Unit (LBU) uses QAPs as part of product acceptance and approval of Supplier’s quality assurance processes.

This document is intended to define LBU quality assurance provisions for inventory materials received from suppliers. It is intended to be used by Suppliers to aid in the quality control of incoming parts.

This document applies to purchase orders (POs) and supply contracts issued by LBU’s Purchasing department.

- QAPs will be communicated to suppliers on LBU Purchase Orders (POs). If QAPs apply, QAP items will be displayed for each line item on the PO (i.e., QAP 1, 2, 4 will require that the supplier meet QAP 1, QAP 2 and QAP 4.).
- Suppliers must meet all QAPs as specified on the PO. If a Supplier is unable to fulfill all QAPs as defined on the PO, written approval is required from LBU.

If the material is purchased through a distributor, the distributor remains responsible for flowing down the requirements to their own suppliers.

REFERENCES

(Use latest revision)

<i>ANSI Z540-1</i>	<i>Calibration System Requirements (supersedes MIL-STD 45662)</i>
<i>ANSI/ASQC Z1.4-1993</i>	<i>Sampling Procedures and Tables for Inspection by Attributes</i>
<i>ANSI/ASQC Z1.9-1993</i>	<i>Sampling Procedures and Tables for Inspection by Variables</i>
<i>AS9100</i>	<i>Quality Management System (QMS) Requirements for Aviation, Defense & Space</i>
<i>IATF 16949</i>	<i>QMS Requirements for Automotive Production</i>
<i>IPC-600</i>	<i>Acceptability of Printed Boards</i>
<i>IPC-610</i>	<i>Acceptability of Electronic Assemblies</i>
<i>IPC/WHMA-A-620</i>	<i>Requirements and Acceptance for Cable and Wire Harness Assemblies</i>
<i>IPC-2221</i>	<i>Generic Standard on Printed Board Design</i>
<i>IPC-2222</i>	<i>Sectional Design Standard for Rigid Organic Printed Boards</i>
<i>IPC-6011</i>	<i>Generic Performance Specification for Printed Boards</i>
<i>IPC-6012A</i>	<i>Qualification and Performance Specification for Rigid Printed Boards</i>

ISO 9001	QMS System Requirements
ISO 10012-1	Quality Assurance Requirements for Measuring Equipment
ISO 13485	QMS Requirements for Medical Devices
88-0119	Cleaning and Deburring of Machined Parts
88-0130	Incoming Inspection of Plated Parts
88-0146	Heat Exchanger Inspection
90-0137	Counterfeit Parts Mitigation – Supplier Requirements
91-0124	First Article Inspection (FAI) Report
91-0299	Conflict Minerals Questionnaire

DEFINITIONS

ELECTROSTATIC DISCHARGE The rapid, spontaneous transfer of electrostatic charge induced by a high electrostatic field.

FIRST ARTICLE INSPECTION REPORT (FAIR)
 A report completed by the supplier which conforms to AS9102 (LBU Document # **91-0124**).

QUALITY ASSURANCE PROVISIONS (QAPs)
 Requirements that are placed on the PO to communicate delivery or performance agreements to be met by the Supplier based on acceptance of the contract.

STATIC SHIELDING Material having conductive properties that acts as a barrier or Faraday cage to protect items from potential damage due to electrostatic discharge (ESD).

SUPPLIER Companies with whom LBU has contracted with to deliver material for manufacture of products.

QUALITY ASSURANCE PROVISIONS

QAP 1: QUALITY CONTROL

Supplier shall, during performance of this PO, maintain a Quality Control organization and system acceptable to LBU. Suppliers are expected to ship product that conforms to the PO issued. Written approval by LBU is required prior to shipment of any nonconforming goods. In addition, the Supplier shall include a copy of the deviation documenting the nonconformance with the shipment. Written notification is required within two (2) business days of nonconforming discovery, if found after shipment.

LBU may issue a *Supplier Corrective Action Request (SCAR)* and root cause analysis upon receipt of nonconforming material or deviation request. The supplier is expected to complete the SCAR in a timely manner and return completed report to the respective LBU Purchasing agent.

Supplier shall notify LBU in writing within 10 business days of any major change in the Supplier's Quality Control organization during fulfillment of this PO, or before accepting any new PO after acceptance onto LBU's approved supplier list. This requirement shall be flowed down to sub-tier suppliers used to complete this PO. Written authorization by LBU is required before shipment.

Supplier shall notify LBU in writing within 10 business days of any changes in process, product, suppliers or facilities, including location changes during fulfillment of this PO, or before accepting any new PO after acceptance onto LBU's approved supplier list. This requirement shall be flowed down to sub-tier suppliers used to complete this PO. Written authorization by LBU is required before shipment.

QAP 1A: ISO 9001 CERTIFICATION

The Supplier shall establish and maintain *ISO 9001* accreditation from an ANAB-accredited or equivalent body.

QAP 1B: ISO 13485 CERTIFICATION

The Supplier shall establish and maintain *ISO 13485* accreditation from an ANAB-accredited or equivalent body.

QAP 1C: AS9100 CERTIFICATION

The Supplier shall establish and maintain *AS9100* accreditation from an ANAB-accredited or equivalent body.

QAP 1D: IATF 16949 CERTIFICATION

The Supplier shall establish and maintain *IATF 16949* accreditation from an ANAB-accredited or equivalent body.

QAP 2: MATERIAL SAFETY DATA SHEET (MSDS/SDS)

All products containing hazardous substances must be labeled in compliance with the U.S. Federal Hazardous Substances Act (FHSA) and have the necessary *Material Safety Data Sheet(s)* (MSDSs) included with the first shipment of a product or if a revision is made to the MSDS.

QAP 3: CERTIFICATE OF CONFORMANCE¹

A *Certificate of Conformance (CofC)* must be included with the shipment specifying that all materials, processes and finished item inspections conform and were controlled in accordance with PO requirements. Records showing these controls shall be on file at the Supplier's facility for seven (7) years.

At a minimum, the *CofC* shall include the LBU part number (P/N), revision (Rev.), PO number, ship date, quantity of items, serial number (SN) and/or lot/batch code, supplier P/N and Rev. (if applicable) and signature of supplier's authorized representative. Any discrepancy or waiver that applies must be noted on *CofC*.

QAP 3A: CERTIFICATE OF CONFORMANCE (CofC)²

The Supplier shall comply with all of the requirements of **QAP 3** with the exception that the *CofC* does not require LBU P/N, Rev. or SN and/or lot/batch code.

QAP 3B: SPECIAL PROCESS CERTIFICATE OF CONFORMANCE (SPCofC)³

Supplier must provide a *SPCofC* with each delivery certifying compliance with all Special Processes required in executing this procurement. The *SPCofC* must contain the Supplier's / Sub-tier Supplier's name and address, Process completed including revision, Type, Class, Certification number. All applicable certifications are to be attached to the *SPCofC*.

QAP 3C: PRODUCTION PART APPROVAL PROCESS (PPAP)

NOTE: The latest edition of the Automotive Industry Action Group (AIAG) *PPAP Manual* is the resource for all PPAP documents.

¹ Subject to verification at LBU Incoming Inspection.

² *Ibid.*

³ *Ibid.*

- First-time delivery of new items requires the completion and submission of the Production Part Approval Process (PPAP) as per AIAG requirements. Suppliers may not ship production parts until LBU has approved PPAP. If LBU receives data that is unacceptable, a corrective action, and/or cost recovery charge can be issued for the time taken to re-do any of the suppliers work.
- Production parts are manufactured at the production site under final production conditions including, but not limited to, production tooling, gauging, process, materials, operators, environment, packaging and process settings (e.g., feeds, speeds, cycle times, pressures, temperatures, etc.).
- Product approval by LBU is required prior to first shipment of product in the following instances:
 - A new part or product not previously supplied to LBU.
 - The correction of a discrepancy on previously submitted parts.
 - Product modified by engineering change order (ECO).
 - Use of other material or manufacture than was previously approved.
 - Production supplied following new or modified tooling.
 - Product supplied following a change in tooling, process, manufacture or equipment.
 - Product from tooling or equipment transferred to another facility
 - Change of subcontractor sourcing.
 - Product re-released after 12 months' inactivity.
 - After LBU suspended shipment due to Supplier quality concern.
 - A material change that has not previously received PPAP approval.
 - Equipment moves or repositioning within the same plant requires requiring requalification.
 - Each occurrence of reworking, resequencing or reprocessing of a part involving customer-critical/significant characteristics that are not already formally defined and documented in the approved flow chart and control plan.
 - Change in packaging.
- Supplier shall inform LBU of any of the activities listed above prior to their implementation.
- Parts for production part approval must be taken from a significant production run. This run would typically be from one (1) hour to three (3) shifts of production, with the specific production quantity to total 300 parts minimum, unless some other quantity has been agreed upon in writing by LBU. Parts from all cavities of a multi-cavity tool, mold, die or pattern are to be measured and

representative parts tested (if applicable). Statistical evaluation data (Ppk) shall be submitted along with first samples.

- Dimensional reports shall be in the same measurement unit as called out on the drawing or specification. For the statistical analysis and process/part control, the supplier shall use a minimum of extra decimal to perform measurements.
- When results are obtained that fail to meet requirements or specifications, the supplier shall immediately notify LBU for instructions. Parts must be held by the Supplier pending written disposition instructions.
- If the supplier cannot pass the PPAP release, LBU reserves the right to purchase the product from another supplier.
- All LBU Distributors shall ensure their direct manufacturers are meeting the expectations as stated in this document. Obligation to release PPAP documentation to LBU representative and verify compliance of its manufacturers with AIAG requirements and LBU requirements will be under Distributor responsibility.

QAP 4: CONTROL OF RECORDS/DOCUMENTATION

The Supplier shall generate and maintain records and data for all inspections and tests performed. The records and data generated shall be appropriate to the inspection and test operations performed and in sufficient detail to provide for complete verification and evaluation of operations. On request, the records will be supplied to the Purchaser and no records will be destroyed without prior permission of LBU. These records may include, but are not limited to:

- Product release certification.
- Records of testing or inspection, such as test certificates, route cards or hatch records that detail product SNs and are required for traceability purposes.
- The Supplier shall retain records for a minimum of seven (7) years unless otherwise agreed in writing by Purchaser. This time period shall be valid from the date of completion of the record.

QAP 5: RIGHT OF ACCESS

Upon the Purchaser providing reasonable notice, the Supplier shall (and procure that its subcontractors shall):

- Allow the Purchaser and persons authorized by the Purchaser (which may include the Purchaser's customer) access to the Supplier's premises (and those of its sub-tier

suppliers) as are being used to carry out work on the goods and services in order to inspect and audit the facilities, processes and procedures used in manufacturing the goods.

- Provide adequate data to the Purchaser relating to progress of work on the goods and their quality.
- Provide all necessary assistance (including, where appropriate, access to office, accommodation, telephone and fax facilities, etc.) to enable the rights set out in PO to be exercised fully.

QAP 6: PACKAGING⁴

All material shipped to LBU is to be packaged in containers that will prevent damage during the shipping and receiving process. To prevent damage related to electrostatic discharge (ESD), ESD-sensitive parts must be packaged using antistatic materials or approved static shielding bag. It is preferred that non-ESD sensitive parts be packaged using antistatic materials where economically feasible. Electronic component and hardware packaging should be sealed or closed in such a way to prevent materials from falling out of packaging.

Materials used for inner packaging (primary packaging material that is in direct contact with the part or is contained inside an outer bag) shall be made from a low-shedding or non-shedding material suitable for use in a Clean Room Environment to help reduce foreign object debris (FOD).

QAP 6A: INDIVIDUAL POLY BAG

Supplier shall comply with all of the requirements of QAP 6 and is also required to place each unit in an individual poly bag to maintain cleanliness.

QAP 7: PACKAGING IDENTIFICATION⁵

Supplier shall identify all containers, packing lists and/or certifications with Supplier Name, PO Number, Item/Line Number, LBU P/N and Rev., Supplier's P/N and Rev. (if applicable), Lot/Batch Number, Date Code or SN (if required) and any Deviations/Waivers that apply.

⁴ Subject to verification at LBU Incoming Inspection.

⁵ *Ibid.*

QAP 8: INDIVIDUAL PART IDENTIFICATION^{6,7}

Each item is to be individually packaged. Packaging label for each item shall include SN, PO Number, LBU P/N and Rev., Supplier's P/N and Rev. (if applicable) and any Deviations/Waivers that apply.

QAP 9: SERIALIZED PART IDENTIFICATION^{8,9}

Items are permitted to be packaged in batches, with a maximum of one (1) lot/batch per package. Packaging label for items shall include S/N(s) or range of S/Ns in package, PO Number, LBU P/N and Rev., Supplier's P/N and Rev. (if applicable) and any Deviations/Waivers that apply.

QAP 10: LOT/BATCH PART IDENTIFICATION^{10,11}

Items are to be shipped in batches, with a maximum of one (1) lot per package. Packaging label for items shall include Lot/Batch Number or Date Code in package, Number of Items in Lot/Batch, PO Number, LBU P/N and Rev., Supplier's P/N and Rev. (if applicable) and any Deviations/Waivers that apply.

QAP 11: PRINTED CIRCUIT ASSEMBLY/PRINTED CIRCUIT BOARD PACKING¹²

Printed Circuit Assemblies (PCAs) / Printed Circuit Boards (PCBs) shall be individually sealed in an antistatic bag to provide electrostatic discharge (ESD) protection and then wrapped or covered with antistatic bubble wrap or foam or placed in an antistatic box.

⁶ Subject to verification at LBU Incoming Inspection.

⁷ Supplier shall be responsible for defining the lot/batch. An individual lot/batch will be determined by the process step with the minimum number of items. Supplier shall furnish lot definition to LBU upon request. Items will be inspected at Incoming Inspection on a lot/batch basis.

⁸ Subject to verification at LBU Incoming Inspection.

⁹ Supplier shall be responsible for defining the lot/batch. An individual lot/batch will be determined by the process step with the minimum number of items. Supplier shall furnish lot definition to LBU upon request. Items will be inspected at Incoming Inspection on a lot/batch basis.

¹⁰ Subject to verification at LBU Incoming Inspection.

¹¹ Supplier shall be responsible for defining the lot/batch. An individual lot/batch will be determined by the process step with the minimum number of items. Supplier shall furnish lot definition to LBU upon request. Items will be inspected at Incoming Inspection on a lot/batch basis.

¹² Subject to verification at LBU Incoming Inspection.

QAP 12: PCA/PCB DESIGN – IPC STANDARD

PCAs shall conform to the requirements of *IPC-2221* and *IPC-2222*, Class 2; Level C. Acceptance of PCAs shall be per *IPC-A-610*, Class 2.

PCBs shall conform to the requirements of *IPC-2221* and *IPC-2222*, Class 2, Level C and shall be manufactured in compliance to *IPC-6011* and *IPC-6012A*, Class 2. Acceptance of PCBs shall be per *IPC-A-600*, Class 2.

QAP 13: CABLE, HARNESES AND RELATED MATERIAL

Unless otherwise specified by the PO or the LBU drawing/specifications, parts shall conform to *IPA/WHMA-A-620*, Class 2.

QAP 14: FIRST ARTICLE INSPECTION – SUPPLIER¹³

First article inspection (FAI) required per *AS9102*. Supplier shall provide an FAI report using either LBU document **91-0124** or a suitable *AS9102* format. An FAI report shall be supplied with the initial shipment of a part number or if a part number has not been delivered in the previous 24 months. A delta FAI will be required for:

- A change in a LBU P/N Rev.
- Any material, design, tooling and/or process change that affects the original FAI of the product.
- A change in facilities.

QAP 15: SUPPLIER INSPECTION – 100% INSPECTION

Inspection by attributes or variables (conforming to *ANSI/ASQC Z1.4-1993* or *ANSI/ASQC Z1.9-1993*) is required using a sampling plan of 100%. Quality records are to be retained by Supplier and available for review by LBU when required. Retention time shall be seven (7) years.

QAP 16: SUPPLIER INSPECTION – ACCEPTANCE QUALITY LIMIT (AQL) 1.0%

Inspection by attributes or variables (conforming to *ANSI/ASQC Z1.4-1993* or *ANSI/ASQC Z1.9-1993*) is required using a sampling plan of AQL 1.0% Level II or an approved alternate. Quality records are to be retained by supplier and available for review by LBU when required. Retention time shall be seven (7) years.

¹³ Subject to verification at LBU Incoming Inspection.

QAP 16A: SUPPLIER ALTERNATE INSPECTION — AMERICAN SOCIETY FOR QUALITY (ASQ) ZERO ACCEPTANCE NUMBER SAMPLING PLAN

Inspection by ASQ Zero Acceptance Number Sampling Plans, Inspection Level C=0, 1.0 AQL is acceptable as a viable alternative to **QAP 16**.

QAP 17: TEST DATA SHEETS¹⁴

Each shipment shall include an appropriate test data sheet for each part number or lot/batch number as specified on the LBU drawing and/or specification. Test data sheets shall reference the LBU P/N and Rev. For optically coated P/Ns, witness sample transmission/reflection results shall suffice, unless otherwise specified on LBU's specification drawing.

QAP 18: RAW MATERIAL TEST DATA SHEETS¹⁵

Each shipment shall include appropriate test data sheet for each part number, lot number, batch-specific material types or heat-treat, as specified on the LBU drawing and/or specification. Test data sheets shall reference the PO Number, LBU P/N and Rev. and Supplier's P/N and Rev. (if applicable).

QAP 19: CONTROL OF SUPPLIERS FOR SPECIAL PROCESSES

Special Processes can include, but are not limited to: Brazing (Vacuum/Dip); Chemical Processes (Including Plating)*¹⁶; Composites; Heat Treating; Material Testing Laboratories; Non-Destructive Inspection or Testing (NDI/NDT); Protective Coatings (Paint/Epoxy); Welding (Resistance/Fusion) etc.

When a Special Process is identified on a Purchase Order (PO), drawing or other specification; the Special Process shall be performed by a NADCAP / LBU Inc. approved source utilizing the appropriate system as agreed upon between Supplier and LBU. The source's NADCAP / LBU Inc. approval must be current and remain so throughout the fulfillment of the PO.

Sub-Tier Special Process Suppliers: Suppliers using sub-tier Special Process Suppliers shall utilize sub-tier Suppliers that are National Aerospace & Defense Contractors Accreditation

¹⁴ Subject to verification at LBU Incoming Inspection.

¹⁵ *Ibid.*

¹⁶ When a Supplier is approved to Chemical Processing by NADCAP, material may be accepted to an identified commercial standard listed in the procurement documents, which may not be listed on the NADCAP-approved list. NADCAP approval for chemical processing shall include applicable military and commercial standards for all types, methods, grades and classes.

Program (NADCAP)-certified or approved by LBU Inc. Should the Supplier's system be approved to control the sub-tier Suppliers, the Supplier shall have records of this approval on file and available for review by the Purchaser's Quality representative(s). Approval of sub-tier Suppliers by the Purchaser does not relieve the Supplier of the responsibility for assuring that work performed by sub-tier Suppliers is in accordance with specification requirements.

QAP 20: MATERIAL TRACEABILITY¹⁷

Goods and services supplied against this PO require full traceability of parts/materials from the time of receipt through delivery of the finished article. Raw material traceability is required to the physical and chemical analysis. If the Supplier is not the original manufacturer of the goods and services, the Supplier shall also provide with the delivery of each consignment, copies of the original manufacturer's *Certificate of Compliance (CofC)* or *Certificate of Conformity (CofC)* together with test results, etc., where applicable.

QAP 21: DEVIATIONS/WAIVERS/CONCESSIONS

All deviations from drawings, specifications, requirements, statements of work (SOWs) or other documents incorporated into the PO by reference are to be referred to the Purchaser's Procurement department for approval and shall be authorized by the Purchaser in the form of an order amendment prior to delivery of the goods and services. Suppliers must demonstrate the requirements for managing product nonconformance's (this includes all hardware and software items where the product item does not conform to the specified requirements) within the business. It is essential that preapproved Deviations/Waivers/Concessions are recorded on all delivery paperwork. Written Deviations/Waivers/Concessions are deemed to be sufficient and formal order amendments, thus obviating unnecessary redrafting of said PO(s). As such, in being order amendments, they are by definition of limited time and/or duration and do not constitute a permanent change to aforementioned drawings, specifications, requirements, SOWs or other documents unless otherwise agreed in writing by Purchaser.

QAP 22: CONFIGURATION CONTROL

The Supplier will establish and control the configuration of their documents such as drawings, specifications, plans and procedures necessary to design, manufacture, test, inspect and deliver goods to the configuration package supplied by the Purchaser. Where the Supplier is designing or supplying systems or subsystems, a configuration management plan may be required by the Purchaser. There shall be no changes or deviations to the contractually agreed Purchaser configuration package without written approval by PO amendment from Purchaser.

¹⁷ Subject to verification at LBU Incoming Inspection.

QAP 23: CONTROL AND MONITORING OF DEVICES

The Supplier and any sub-tier suppliers shall hold current *ISO 9001* certification. Their scope approval shall include calibration capability. Test equipment shall have its performance and calibration verified for all parameters detailed in its manufacture's published performance or calibration specification, against measurement standards traceable to National or International Standards (NIST). At the request of the Purchaser, the Supplier or the Supplier's sub-tier suppliers shall provide calibration certificate(s) and test report(s) showing all test results, including an estimate of the uncertainty of measurement.

QAP 24: FOREIGN OBJECT DAMAGE

The Supplier shall develop and maintain a Foreign Object Debris or Foreign Object Damage (FOD) prevention program for manufacturing areas. The intention is to prevent introduction of foreign objects into any item delivered under this PO. *National Aerospace Standard 412 (NAS 412)* is available as a guideline.

The Supplier shall employ appropriate housekeeping practices to assure timely removal of residue/debris generated, if any, during manufacturing operations and/or normal daily tasks. The Supplier's FOD program shall be proportional to the sensitivity of the design of the product(s) to FOD, as well as, to the FOD-generating potential of the manufacturing methods.

QAP 25: RESTRICTION OF HAZARDOUS SUBSTANCES — SOLDER AND COMPONENT FINISHES 1

Defense equipment Suppliers and customers have major concerns over the reliability of lead-free solder and the risk of "tin-whisker" growth on components with tin-based plated finishes. Most defense equipment is out of scope from the current Restriction of Hazardous Substances (ROHS) and Waste Electrical and Electronic Equipment (WEEE) legislation and, therefore, is not obliged to use lead-free component finishes and solders. Consequently, the Purchaser requires the Supplier to fully comply with specified component finishes and solders. In addition, the Supplier is required to maintain a clear definition and configuration control of the component finishes and solders within products delivered to the Purchaser.

Unless explicitly specified otherwise by either party, the Purchase requires the use, and continuing use, of lead-based solder in all electrical or electronic assemblies.

Components with lead-free finishes may be used. Provided they are compatible with the storage manufacturing and reliability requirements (e.g., nickel-palladium-gold (NiPdAu) finishes are generally acceptable). The Purchaser(s) and customers have reservations on using components with tin-based, plated finishes containing less than 3% lead. Unless explicitly

specified otherwise by the Purchaser, the Purchaser requires Suppliers to inform us of the use of components with tin-based, plated finishes containing less than 3% lead in order to assess the “tin-whisker” risk.

QAP 26: RESTRICTION OF HAZARDOUS SUBSTANCES — SOLDER AND COMPONENT FINISHES 2

LBU requires all items shipped against this PO to be ROHS-compliant.

QAP 27: INSPECTION CRITERIA OF GOLD METALIZED PURCHASED PARTS¹⁸

LBU requires all items shipped against this PO to meet all requirements of LBU document **88-0130**. It is the Supplier’s responsibility to verify that all items are being inspected to the latest version. The document’s latest revision can be obtained from the LBU Purchasing department. Supplier shall reference this Document Number and Rev. on the CofC.

QAP 28: INSPECTION CRITERIA OF BRAZED, ANODIZED AND CHROMATED PARTS¹⁹

LBU requires all items shipped against this PO to meet all requirements of LBU document **88-0146**. It is the Supplier’s responsibility to verify that all items are being inspected to the latest version. The document’s latest revision can be obtained from the LBU Purchasing department. Supplier shall reference this Document Number and Rev. on the CofC.

QAP 29: CLEANING AND DEBURRING OF MACHINED PARTS²⁰

LBU requires all items shipped against this PO to meet, at minimum, Class B for Deburring and Class 1 for Cleaning per LBU document **88-0119, SECTION 6 – DEBURRING MAGNIFICATION REQUIREMENTS** and **SECTION 7 – CLEANING**, respectively. It is the Supplier’s responsibility to verify that all items are being inspected to the latest version. The document’s latest revision can be obtained from the LBU Purchasing department. Supplier shall reference this Document Number and Rev. on the *CofC*.

QAP 29A: CLEANING AND DEBURRING OF MACHINED PARTS²¹

Supplier shall comply with all of the requirements of QAP 29 but, at a minimum, meet Class 2 requirements for cleaning.

¹⁸ Subject to verification at LBU Incoming Inspection.

¹⁹ *Ibid.*

²⁰ *Ibid.*

²¹ *Ibid.*

QAP 30: COUNTERFEIT PARTS MITIGATION

LBU requires all items shipped against this PO to meet all requirements of LBU document **90-0137**. It is the Supplier's responsibility to verify that all items are being inspected to the latest version. The document's latest revision can be obtained from the LBU Purchasing department. Supplier shall reference this Document Number and Rev. on the *CofC*.

QAP 31: CONFLICT MINERALS

Per **SECTION 1502** of the *U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010*, LBU requires due diligence confirming Conflict Minerals Regulation & Compliance for products conflict minerals that are mined in the Democratic Republic of the Congo (DRC) or other conflict nations. Suppliers that provide LBU with conflict minerals/metals shall be asked to fill out **91-0299 — Conflict Minerals Questionnaire** or complete a Conflict Minerals Reporting Template (CMRT) [found at www.responsiblemineralsinitiative.org] and return it to LBU.

Conflict minerals are currently defined to be:

- Gold [Au]
- Tantalum [Ta] (Columbite-Tantalite, Coltan)
- Tin [Sn] (Cassiterite)
- Tungsten [W] (Wolframite, Scheelite, Ferberite, Hübnerite)

Revision History			
Revision	C.O.#	Description	Date
A	5058	Initial release.	9/8/2015
B	5946	Update logo; QAP 6 regarding packaging; QAP 24 regarding non-FOD packaging; QAP 29 for min. deburring & cleaning requirements; QAP 31 regarding suppliers filling out 91-0299. Added QAP 29A for separate cleaning requirement.	3/27/2018
C	5989	ADD QAP 3B. Update QAP 19.	4/6/2018
D	6031	Update QAP 19.	5/30/2018
E	6105	Added QAP 6A.	8/24/2018
F	6410	Updated QAP 2 to reduce MSDS paperwork.	8/20/2019
G	6551	Added/updated References; added QAP 1D, QAP 3C.	3/5/2020
H	6831	Updated QAP 31. Moved "Notes" to Footnotes.	12/22/2021