1.0 PURPOSE

The purpose of this document is to provide SL-Montevideo Technology, Inc (SL-MTI) suppliers the minimum Quality requirements that supplement those specified in the purchase order.

2.0 SCOPE

This procedure is applicable to all SL-MTI suppliers and all members of their supply chain that provide production hardware or processes required for production hardware. Portions of this manual may be waived at the discretion of SL-MTI quality department. These requirements are in addition to those specified in the purchase order, engineering drawings and related specifications and shall be flowed down to all sub tier suppliers.

3.0 RESPONSIBILITY

The contractual obligations of SL-MTI and the highly competitive and technical nature of the industry requires that our suppliers' quality control systems will assure that materials and services will meet the quality standards required by SL-MTI and our customers. Each supplier must be aware of and enforce all drawing, specification and purchase order requirements. Acceptance of the purchase order(s) constitutes acceptance of the Supplier Quality Requirements Manual. Nothing in this manual shall in any way limit the supplier's obligation to ship on-time, defect free parts.

4.0 REFERENCE DOCUMENTS

AS9100	Aerospace Standard
AS9102	Aerospace First Article Inspection Requirement
ANSI/ESD S20.20	Development of an Electrostatic Discharge Control Program
NAS 412	Foreign Object Debris (FOD) Prevention
SAE AS5553	Counterfeit Electronic Parts
MTI-507	Supplier Request for Deviation (Mexico Purchase Orders)
FO-12027	Deviation Request Form (Pleasant Prairie Purchase Orders)

5.0 SUPPLIER'S QUALITY PROCEDURES

5.1 Suppliers must have written quality procedures defining their Quality System. All such procedures shall be subject to surveys or audits by SL-MTI. Suppliers and supplier's subcontractor's facilities contracted products, procedures and records, excluding proprietary data, shall also be made available to Government representatives and other customers auditing SL-MTI's control of suppliers.

5.2 All new suppliers shall be subject to an on-site Quality survey by SL-MTI Purchasing and/or Quality representatives, or complete a self-survey outlining the supplier's Quality System and procedures. ISO 9000 or AS9100 certified companies are given priority in selection of suppliers.

5.3 The Supplier's Quality System shall be subject to audit and acceptance by SL-MTI, and the SL-MTI's commercial/Government customers to the extent necessary to determine the supplier's continued compliance to contractual requirements. This provision shall include inspection of the subcontracted product at the supplier's or SL-MTI facilities.

5.4 Suppliers are required to notify SL-MTI in writing of any change to supplier's Quality System, including system registrations, changes in management/ownership, facility relocation, or any changes that could affect the supplier's ability to meet the requirements of the purchase order.

6.0 DRAWING REQUIREMENTS – ENGINEERING CHANGES – SPECIFICATIONS

6.1 It is the supplier's responsibility to have available all current specifications and/or Government documents required by SL-MTI drawings or purchase orders. It is also the supplier's responsibility to assure all applicable SL-MTI Engineering changes are incorporated as instructed by the purchase order. All drawings may be obtained from the SL-MTI Purchasing Department. Military Standards and related technical specifications can be obtained from either SL-MTI, the Internet, or from the applicable Government source.

6.2 Suppliers are required to comply with the current revision of any specifications contractually specified (by purchase order and/or drawing) contained in the Department of Defense Index of Specification and Standards (DODISS) on the date of purchase order award to the supplier unless specifically stated otherwise on the drawing or purchase order.

6.3 The supplier is required to comply with the requirements of the purchase order and all referenced drawings and/or specifications. However, where circumstances dictate, the supplier may desire to request permission to deliver non-conforming items or material. This request shall be made on deviation request form MTI-507 or FO-12027 as required per section 4.0, which can be obtained through your Buyer. Written authorization via this form must be received prior to shipment of material.

6.4 In the event it is discovered that nonconforming product(s) have previously been delivered to SL-MTI, the supplier shall notify the SL-MTI Buyer within 24 hours of discovery. The notification shall be in the form of a letter, a receipt acknowledged e-mail, or other positive notification method. The letter must include all pertinent information concerning the condition (i.e. part numbers, purchase order number, quantities, time frame, description of condition, etc) and the corrective action taken to prevent recurrence.

6.5 In the event that an item purchased by SL-MTI becomes obsolete, SL-MTI requires 12 months notification of such and reserves the right to make a “last buy” to insure uninterrupted delivery to the end customer.

6.6 The supplier may not perform any repairs such as welding, brazing, soldering, plugging, peening, bushing, or use of paints, adhesives or plating, or use any other standard or other repair practice or method on products damaged or found to be discrepant during fabrication or processing, unless repairs are specifically permitted by the applicable drawing or specification, or authorized by SL-MTI via deviation request form MTI-507 or FO-12027 as required per section 4.0.

7.0 SUPPLIER CONTROL OF PURCHASED MATERIAL AND SERVICES

7.1 The supplier must maintain effective control of procurement sources to ensure compliance to design, specification and quality requirements as clearly defined on the purchase order, as well as have an acceptable method of reviewing incoming materials or services. The supplier must maintain up to date records that incoming materials have satisfactorily complied with all purchase order requirements. The supplier may not subcontract goods or services without prior notification and approval of SL-MTI.

7.2 Certifications for supplier purchased raw materials must include a chemical/physical test report and/or material description, heat lot identification and specification reference with revision/amendments and be kept on file for a minimum of 15 years or as otherwise specified on the purchase order. Certifications must be traceable to the SL-MTI purchase orders and part numbers in which the material was used for.

8.0 QUALITY INSPECTION REQUIREMENTS

8.1 The supplier shall maintain a Quality Inspection System that will assure that items produced will meet the latest drawing, specification and purchase order requirements. This shall include having a First Article Inspection performed and documented per the requirements of the most current revision of AS9102. Note that this includes a bubbled drawing with all characteristics accounted for including all dimensions, itemized tables, figures, and notes. In addition to the requirements of AS9102, SL-MTI also requires that the method of measurement or verification of each characteristic be recorded and that the person performing the inspection be identified. This is typically accomplished using Form 3, Column 14 of the AS9102 forms. The first article part and report shall be packaged separately and shipped with the balance of the first shipment of the purchase order. This may be a Delta FAIR per the guidelines of AS9102 if there is a full baseline First Article Inspection report on file.

A copy of AS9102 may be obtained from the SL-MTI Purchasing Department, or the Internet at http://www.sae.org/technical/standards/AS9102B. Full or partial FAI is required when any of the following occur:

8.1.1 First time production.
8.1.2 A print revision changes.
8.1.3 A change in the design affecting, form fit or function of the part.
8.1.4 A change in manufacturing source(s), inspection methods, location of manufacture, tooling or materials that can potentially affect fit, form or function.
8.1.5 A natural or man-made event, which may adversely affect the manufacturing process.
8.1.6 A lapse in production for two years or as otherwise specified.

Suppliers that have not previously completed AS9102 FAIs for parts produced prior to the addition of this requirement (6/30/17) will perform a complete FAI when any of these triggering events occurs.

8.2 The Production Part Approval Process (PPAP) published by AIAG has been adopted by SL-MTI. PPAP is used to cover submission of information and parts that represent mass production runs, changes in material, and changes in location, on-going quality issues or anything affecting form, fit or function such as engineering change. If quantities allow, PPAP samples should be taken from a 300-piece production simulated run.

8.2.1 Submit appropriate amount of parts as defined by SL-MTI.
8.2.2 Submit the completed Part Submission Warrant to the correct level (1-5).
8.2.3 Maintain and submit, as required, all documentation to support the Part Submission Warrant.
8.2.4 Maintain the design records, CAD math data, drawings etc.
8.2.5 Maintain Engineering change documentation.
8.2.6 Maintain all dimensional results as called out in the design drawing.
8.2.7 Maintain material performance and durability test results.
8.2.8 Construct a Process Flow Diagram that accurately depicts each step in the process.
8.2.9 Perform a PFMEA (Process Failure Modes and Effects Analysis) on the process flow diagram referenced in step 8.2.8.
8.2.10 Develop a Control Plan to demonstrate how the product will be controlled throughout the process flow. Control Plan must align as output of the PFMEA.
8.2.11 Demonstrate the capability of all processes to manufacture the product within statistical acceptability utilizing Ppk or Cpk analysis.
8.2.12 Perform and maintain GR&R (Gage Repeatability and Reproducibility) studies for new or modified gages, measurement and test equipment. (Reference AIAG Measurement Systems Analysis Manual, for methods.)
8.2.13 When the product is designated for Aircraft/Aerospace, the layout component of the PPAP package must include all required FAI documentation in the AS9102 format.
8.2.14 A signed approved warrant from shall be received from SL-MTI prior to the shipment of any production product.

Submission Levels:
Level 1 – Submission of warrant only.
Level 2 – Submission of warrant, product samples and limited supporting data.
Level 3 – Submission of warrant, product samples and complete supporting documentation.
Level 4 – Submission of warrant, NO product samples with complete supporting documentation.
Level 5 – Completed warrant with product samples and complete supporting documentation reviewed on-site at the supplier location.

Level 3 is the default level to be utilized for all submissions unless specifically advised otherwise by SL-MTI.

8.3 When required by the purchase order, the supplier is expected to prepare, maintain, and follow a Control Plan, which specifies the quality planning routine for a part or family of parts. The Control Plan shall cover all stages of production, from receipt of purchased materials through packaging and shipping. The Control Plan will be subject to review by SL-MTI. The supplier-provided FMEA will be used in evaluating the Control Plan.

8.3.1 Control Plans must include at a minimum: proper identification of the part and operation, date issued and approved, engineering change level, frequency and quantity of pieces or process parameters to be inspected for each characteristic, the acceptance / rejection criteria, the method of inspection (type of gages, test equipment, etc.), and the reaction plan for suspect / nonconforming conditions. The reaction plan must address quarantine / segregation, purging of nonconforming material, and verification of corrective actions.

8.3.2 The Control Plan must, at a minimum, address each SL-MTI / Customer Special Characteristic. The Control Plan shall also include supplier-selected characteristics or elements of the processes that impact the Special Characteristics or are critical to the process which may impact the end customer of SL-MTI.

8.4 The supplier's Quality System shall identify the inspection status of items produced. Inspection status may be accomplished by means of stamps, tags, move tickets, routing cards or other readily identifiable methods.

8.5 Where 'KEY' Characteristics are called out on a drawing, the supplier shall utilize Statistical Process Control (SPC) to control these characteristics. The Statistical Process Control Reference Manual published by the AIAG is recommended by SL-MTI suppliers as a standard approach to statistical analysis and application of basic statistical process control techniques. If the supplier determines that SPC is not acceptable, or if a process has become unstable or out of control, the alternative would be to perform 100% inspection on the noted Key Characteristics.

8.6 If sample inspection is utilized, sampling plans must be in accordance with ANSI Z1.4 or C=0 (zero) defects sampling as a minimum (unless otherwise stated on the purchase order). Sample inspection that reveals a defective characteristic will require 100% screening for that characteristic.

8.7 Unless otherwise specified, procedures shall be implemented to ensure that eye examinations, including visual acuity and color vision, as applicable, are administered by a medically qualified / trained person to all individuals performing visual inspection, other product acceptance activities and/or M&TE calibration that require visual acuity. **This requirement shall be flowed down to all sup-tier suppliers.**

- Intervals shall not exceed one year.
- Individuals shall be tested in at least one eye, either corrected or uncorrected.
- Color Perception testing is required one time only. Individuals shall be capable of adequately distinguishing and differentiating colors used in the method for which certification is required, the process being performed or inspection activity.
- Records shall be retained for each individual.

***Note**: Vision tests may be substituted for the options listed in the Table providing the equivalence is verified and documented by a licensed optometrist or ophthalmologist.*

Individual performing …	Shall be compliant with minimum vision requirements of
Visual inspection (i.e. calibration, non-weld, in-process, layout, dimensional)	Near vision requirements of • Snellen 14/18, (20/30), • or Jaeger 2
Visual Inspections on Welds	American Welding Society Standard (AWS) D17.1
Nondestructive Testing (NDT)	Aerospace Industries Association National Aerospace Standard (AIA/NAS) 410

9.0 NON-CONFORMING MATERIAL / CORRECTIVE ACTION

9.1 The supplier is responsible for repairing or replacing nonconforming material to specifications in order to meet SL-MTI timing requirements. Reworked or sorted material must receive independent quality inspection before being returned to the production flow. In some cases, nonconforming material may be sorted or reworked by SL-MTI at the supplier's expense. The supplier is expected to focus quickly on containment of the problem. Costs created by non-conforming material including rework labor, overtime, freights, expedites, hiring contract agencies may be charged to the supplier.

9.2 Suppliers receiving a Supplier Corrective Action Request from SL-MTI are expected to respond within 48 hours from the time of notification with a containment plan. Written corrective actions must be submitted within 30 calendar days. An extension may be granted by SL-MTI Quality Assurance based upon the corrective action(s) required or the nature of the nonconformance. The response must detail the root cause of the deficiency as well as the action taken to correct it. Any procedural changes, documented process improvements, or Quality Manual changes should be attached to the response. Increased inspections, verbal instructions/warnings or responses that do not address items specifically as they are listed on the SCAR may be rejected.

10.0 CERTIFICATIONS AND SUPPORTING DOCUMENTATION

10.1 A completed Certification of Conformance form or equivalent statement on the packing slip shall accompany all shipments to SL-MTI. The certificate shall display, as a minimum, the supplier name, the manufacturer's name (where applicable), the manufacturer's physical plant location (an attached manufacturers certification showing manufacture site is permissible), purchase order number, SL-MTI part number and revision level, quantity shipped, a statement certifying that the products furnished comply with the applicable drawing and specifications, and a signature and title of an individual responsible for Quality.

10.2 In addition to the standard Certification of Conformance of Para 10.1, additional certification documents are required with each shipment as follows:

10.2.1 If the SLMTI purchase order or drawing specifies material requirements, a separate Certificate of Conformance for the material. For metallic materials, this includes the mill certification, containing chemical/physical tests, heat lot ID, and specification, and establishes a chain of custody from the contract holder to the melt source.

10.2.2 For electronic and Commercial Off the Shelf (COTS) components, an original part manufacturer certification as well as documentation identifying the name and location of all supply chain intermediaries (if any) from the part manufacturer to the direct source.

10.2.3 For special processing requirements, see Section 11.0.

10.3 Suppliers of shelf life sensitive materials shall also furnish a legible certificate with each shipment of perishable goods referencing the batch number, the material specification (including revision and amendments) stating required storage conditions and/or shelf-life expiration periods as applicable.

10.4 Failure to comply with certification requirements will result in rejection and payment delay.

10.5 The use of any method that causes the original data of documents to be obliterated and unreadable (ie, the use of correction fluids, correction tape, or write-overs) to correct, modify or otherwise alter the data on any certifications or test reports is prohibited. Corrections may be made on records providing it is clearly obvious that a correction was made and it is signed (initialed) or stamped and dated by an authorized individual.

10.6 If the product being supplied is serialized or datecoded, that specific information (serial numbers, datecodes) shall be listed on the Certificate of Compliance.

11.0 SPECIAL PROCESS CERTIFICATION AND CONTROL

11.1 In addition to a general Certification of Compliance (see 10.1), special process requirements shall require an additional certification that identifies the process performed (as specified on the drawing/specification). Special processes include the following: All plating processes, anodizing, passivation, NDI (liquid penetrant, x-ray, and magnetic particle) inspections, and heat treating. This Certification of Compliance shall be provided from the organization who performed the process.

11.2 When specified by the drawing or purchase order, special processes must be performed by sources approved by SL-MTI and/or its customer. Special process suppliers shall be NADCAP certified. Evaluation by CQI AIAG may be permitted when approved by SL-MTI.

12.0 MEASURING AND TEST EQUIPMENT CALIBRATION

Suppliers measuring and testing equipment calibration/verification systems shall be able to produce documentation verification that ensures an established system and records of calibration traceable to National Institute of Standards and Technology (NIST).

13.0 HANDLING, PRESERVATION, PACKING, SHIPPING

13.1 Suppliers shall assure that materials are packaged in a manner that will prevent damage, deterioration, corrosion and preclude moisture, foreign matter or contamination damage.

13.2 All components, subassemblies, and assemblies identified as ESD will be treated as Class 1 per ANSI/ESD S20.20. Electrostatic Discharge Sensitive components or assemblies that contain ESD sensitive components shall be packaged in approved protective packages and labeled with the ESD caution symbol. Appropriate ESD controls must be used by the supplier in every handling/storage element of their operation, from material receipt through fabricating, testing, packaging, and shipping.

13.3 All packaging containing bearings shall have a label which specifies lubrication type, lot code and date of lubrication.

14.0 RECORDS

Suppliers shall maintain Quality Inspection and traceability records of parts produced for a period of fifteen (15) years or as otherwise specified on the Purchase Order. These records must be available for review within 24 hours of a request by SL-MTI's Purchasing or Quality personnel. Prior to discarding any quality record, the supplier shall contact SL-MTI Purchasing or Quality and obtain written approval.

15.0 CONFLICT MINERALS

15.1 Suppliers shall acknowledge that SL-MTI is a public company that files reports with the U.S. Securities and Exchange Commission ("SEC") and is subject to Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (the "Conflict Minerals Law"). Under the Conflict Minerals Law, Buyer will be required to submit reports and disclose (a) whether any Tantalum, Tungsten, Tin or Gold (Conflict Minerals or 3TG) necessary to the functionality or production of SL-MTI's products originated from the Democratic Republic of the Congo ("DRC") or any adjoining country; and (b) if any Conflict Minerals did originate in the DRC or an adjoining country, the due diligence measures taken by Buyer to identify the source of the Conflict Minerals used in its products.

15.2 Suppliers shall cooperate with SL-MTI from time to time, at no additional cost to SL-MTI, in SL-MTI's performing a reasonable due diligence investigation on the origin of Conflict Minerals contained in items delivered to SL-MTI under these purchase order requirements to enable SL-MTI to comply with its disclosure and reporting obligations under the Conflict Minerals Law.

Such due diligence may include but shall not be limited to assisting SL-MTI in conducting a "reasonable country-of-origin inquiry" on such Conflict Minerals or completing and submitting to SL-MTI such questionnaires or templates relating to the origin of Conflict Minerals contained in SL-MTI products, as SL-MTI shall request.

16.0 **COUNTERFEIT MATERIAL CONTROL**

The supplier shall have processes and controls to ensure no Counterfeit Material is delivered to SL-MTI. Supplier shall maintain documentation, i.e. Certificates of Manufacture, Certificates of Compliance, Independent 3rd party testing, etc, necessary to assure traceability of the parts to the Original Equipment Manufacture specified on the SL-MTI drawing. SAE AS5553 provides guidance for counterfeit prevention.

17.0 **FOD CONTROL PROGRAM**

Foreign Object Damage: The supplier shall develop and maintain a Foreign Object Debris/Damage (FOD) Prevention Program for manufacturing areas to prevent introduction of foreign objects into any item delivered under this purchase order using NAS412 as a guide. 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 shall determine if sensitive areas that may have a high probability for introduction of foreign objects should have special emphasis controls in place appropriate for the manufacturing environment. The supplier shall determine the need for and implement FOD prevention awareness programs. When applicable, the Supplier's FOD control program shall include controls to preclude FOD or contamination at the supplier's sub-tier sources.

18.0 **PROCESS CHANGE CONTROL**

Upon approval by SL-MTI as a qualified source, through first article or first lot acceptance, the supplier shall make no changes in design, materials, process (including moving the production location), or source of major components without prior notification and approval of SL-MTI. For the purpose of this clause, a process is defined as any procedure, system or practice used during the manufacture or production of a deliverable item (i.e. machining, de-burring, heat treating, soldering, cleaning, finishing, etc.).

19.0 **EMPLOYEES' SUITABLE ENVIRONMENT AND AWARENESS**

In accordance with AS9100, ensure that persons of your organization are aware of: their contribution to product or service conformity; their contribution to product safety; and the importance of ethical behavior. In addition, ensure that a suitable environment is fostered by management which can be a combination of human and physical factors, such as:

a. Social (e.g., non-discriminatory, calm, non-confrontational)
b. Psychological (e.g., stress-reducing, burnout prevention, emotionally protective)
c. Physical (e.g., temperature, heat, humidity, light, airflow, hygiene, noise)

20.0 **PREVENTIVE MAINTENANCE**

Supplier will develop a planned preventive maintenance program for Critical tooling and equipment utilized to affect form, fit, function, quality of subsequent manufacturing operations or items affecting safety or Government regulations. Records of maintenance performed will be retained and readily available.

21.0 **CONTINUOUS IMPROVEMENT**

Supplier will develop a continuous improvement plan to include:

a. Comprehensive plan as it relates to quality, service and price
b. Develop specific action plans to address the largest variation
c. Establish product characteristics and process parameter metrics
d. Optimize the target value and conduct activities that reduce the variation around that value

Examples of continuous improvement may be reducing unscheduled machine down-time, machine set-up time, cycle time, scrap and rework, customer complaints, or key dimensional variation. (Improving Cpk's)

22.0 **BUSINESS CONTINUITY**

The Supplier should have a business continuity plan which would allow for the safeguarding, storage and recovery of engineering drawings, electronic media and production tooling in the event of damage or loss. This plan should also include contingency plans to fulfill XYZ requirements in the event of significant utility interruptions, labor shortages, equipment failure and field returns.

CHANGE MATRIX		
REVISION	**DATE**	**CHANGE**
A	2/22/2013	Section 4.3 Changed must to should. Page 7. Section 6, Level 7, Added "initial" PPAP definition. Page 10
B	5/28/2013	Section 6 PPAP. Removed submission levels 6 & 7 from PPAP submission warrant to be consistent with AIG PPAP manual submission requirements. Added Aerospace FAI requirements to the PPAP process. Updated Section 12
C	10/25/2013	Section 12. Changed "may" to "will" for action to be taken against suppliers falling below expectation. Add not to rank order suppliers and taken action against the top 3 worst performing.
D	4/21/2014	Changed Section 12 from supplier classification to supplier improvement initiative. Introduced PCAR Process (Performance Corrective Action Report).
E	11/1/2014	1.Include compliance to standards 2.Section 2. Manufacturing Capabilities, Supplier Responsibility, add "4. Supplier must complete feasibility agreement with a final quotation of a part." and add Production Feasibility Agreement form. 3.Section 5. Change control, supplier responsibility, add "4. Supplier must use Supplier Change Request form to request a change. Supplier shall not make any change until Supplier Change Request is approved by HS." and add Supplier Change Request form. 4.Section 6. PPAP (Production Part Approval Process), Supplier Responsibility, add "submit the PPAP package to Supplier Quality by email only." Add reference to counterfeit part prevent and lead free procedures.
F	10/31/2016	Updated Logo and verbiage
G	7/24/2017	Added new delivery expectations consistent with MTI. 9. Delivery
H	3/31/2018	Clarified and updated supplier requirements
J	8/28/2019	Complete Re-write

SL-MTI

Supplier Quality Requirements Manual (SQRM)

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Web Site: www.slmti.com

Printed Name	Signature
Company Name	Position

Signature is an acknowledgement that the Supplier has received a Supplier Quality Requirements Manual, was communicated of the requirements, read and understood the expectations, and accepted the responsibility.