



# **Laboratory Procurement Quality Assurance Requirements**

This document establishes quality assurance (QA) controls applicable to Fluor Marine Propulsion LLC (FMP and Buyer) purchase orders (POs). The supplier is responsible for complying with the clauses of this document which are specifically invoked by the PO. These requirements may be in addition to other QA controls included in drawings, technical ordering requirements, etc., identified elsewhere in the PO. In the event there is a conflict between the QA clauses invoked in the PO and the other QA controls which may be included in the PO, the "Order of Precedence" article in the PO shall apply.

### **QA Clause 1 - Independent Inspection Function**

Final acceptance inspections or tests to verify product and service acceptability shall be performed by personnel other than those who produced the characteristics under review. The supplier shall perform or have performed all of the inspections and tests necessary to substantiate product and service conformance with the applicable drawings, specifications, and PO requirements for all items supplied as part of the procurement and for all characteristics of those items. Characteristics include any dimensional, visual, functional, mechanical, electrical, chemical, physical, or material feature or property of the products.

### **QA Clause 2 - Inspection Point Plan (IPP)**

An IPP that may be included as part of a process outline, manufacturing, or fabrication procedure, which the supplier and their lower-tier suppliers will follow to ensure the PO requirements will be met, shall be submitted to the Buyer for approval prior to the start of manufacture or fabrication. The IPP shall reference drawings and other documents (including applicable revisions) used to prepare the plan and shall cover all operations from starting material through final preparation for shipment or release, including applicable lower-tier suppliers' inspections.

Partial IPP submittals are authorized provided continuity of the total IPP is preserved through explicit identification (tie-in) on subsequent submittals. Each inspection operation identified in the IPP shall indicate the stage of manufacture or fabrication where the inspection operation is to be performed. All inspections which are final acceptance inspections in preparation for shipment shall be indicated by a symbol or other appropriate method.

After receipt of the IPP, the Buyer will provide the supplier with written communication regarding the additional inspections and tests that the Buyer plans to perform during the manufacturing/fabrication process; or the inspections and tests performed by the supplier [or the supplier's lower-tier supplier(s)] that the Buyer intends to witness. These mandatory hold points may not be bypassed by the supplier without written Buyer authorization. When requested by the Buyer, the supplier shall arrange for and accompany the Buyer's representative(s) to the supplier's involved lower-tier suppliers' facilities.

### **QA Clause 3 - Special Process Quality Plan (SPQP)**

An SPQP shall be established by the supplier to define the specific actions that will be taken to meet the quality requirements related to special processes [e.g., welding, brazing, plating, cleanliness, detrimental material controls, heat treating, hard facing, nondestructive testing (NDT), electric discharge machining, electric chemical machining, etc.] invoked by the PO. The SPQP shall be submitted to the Buyer for approval prior to the start of manufacturing or fabrication and shall include, as a minimum, the following:

- A list of all special processes that will be performed
- If applicable, identification of product or services to be obtained from a lower-tier supplier and the identification of the lower-tier supplier
- A description of the inspections and tests that will be performed to control and evaluate the special processes required by the PO

- A detailed summary of the supplier's personnel and procedure qualification programs to ensure compliance with the applicable codes, specifications, and standards required by the PO

#### **QA Clause 4 - Lower-Tier Suppliers**

The supplier is responsible for the performance of their lower-tier suppliers and shall maintain a system to ensure that all purchased materials, equipment, and services conform to the Buyer's PO requirements, including:

- Selection of qualified (in accordance with the supplier's quality management system requirements) lower-tier suppliers
- Pass down of the Buyer's PO requirements
- Quality surveillance process and product verification of procured items and services, including a detailed review of all material test reports, inspection and test data, and personnel and procedure qualification documentation received from all lower-tier suppliers (including foreign suppliers) to ensure that all applicable codes, specifications, and standards invoked in the Buyer's PO requirements have been fully met for the products and services provided by the lower-tier supplier
- Information feedback and correction of non-conformances

Attachment IV provides an optional template for a lower-tier supplier control plan that may be used at the supplier's discretion.

#### **QA Clause 5 - Material Test Report (MTR)**

Hard copies of the MTR verifying conformance with the PO material specification(s) shall be obtained and submitted to the Buyer for information with the final product shipment, unless otherwise required by the PO. MTRs shall report actual quantitative chemical and mechanical properties test data, and country of origin as required by the PO. The MTR shall consist of a legible copy of the certificate as supplied by the testing facility or a statement that the results were taken from the original test report furnished by the test facility. Copies of the MTRs provided by the supplier shall identify the FMP Buyer's PO number, the drawing and item number (if applicable), country of origin, and the heat number of the material that was used in the fabrication of the product.

#### **QA Clause 6 - Identification and Control of Materials, Parts, and Components**

The supplier shall be capable of finding all objective quality evidence of the identification for materials, parts, and components, given only the marking on that material, part, or component. Heat numbers, or other identity control numbers, shall be maintained on materials, parts, and components to prove traceability to parent material inspection and test records. Identification control of a component, part, or material shall be maintained throughout all stages of receipt, storage, manufacture, assembly, testing, and delivery. Bagging/tagging, or an alternate equivalent method of identification, is permitted for use on materials, parts, and components too small to be marked individually, unless otherwise specified in the PO. Markings shall not interfere with the functional or quality aspects of the material, part, or component.

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## **QA Clause 7 - Supplier Requirements for Use of Measurement and Test Equipment**

The supplier shall utilize the required gaging, measuring, and test equipment for use in the manufacture and testing of the products being procured. Measurement and test equipment shall be calibrated at regular intervals using standards traceable to the National Institute of Standards and Technology (NIST) or other nationally recognized standards. Standards established by the supplier for calibrating the measurement and test equipment used in controlling product quality shall have the capabilities for accuracy, stability, and range for intended use. The readability of measurement equipment shall be within 10% of the specified tolerance range for the characteristic being measured (10-to-1 rule). Records of such calibrations shall be maintained by the supplier. If the Buyer has reason to question the accuracy of the calibration, a recalibration of the questionable equipment may be required and witnessed. When measurement and test equipment is found to be out of tolerance during re-calibration, the supplier shall investigate prior use of the equipment on the Buyer's product to determine the validity of prior inspections or tests. The Buyer shall be contacted if the materials or services were determined to not have met the Buyer's requirements.

## **QA Clause 8 - Discrimination of Measurement Equipment and Interpretation of Limits**

Line-graduated or digital-readout measuring and testing devices shall be graduated to intervals of 10% or less of the specified product tolerance for the characteristic being measured (10-to-1 rule).

## **QA Clause 9 - Sampling Inspection**

The supplier may use sampling inspection procedures in lieu of 100% inspection for acceptance on multiple parts or components. The supplier shall submit their proposed sampling procedures and obtain written Buyer approval prior to use. Submitted sampling procedures shall be based on sampling tables specified in nationally recognized specifications or standards.

## **QA Clause 10 - Supplier Maintenance and Retention of Inspection and Test Records**

The supplier shall maintain all maintenance, inspection, and test records that substantiate product conformance to the requirements of the PO. The records shall be protected from loss, deterioration, or damage. Unless otherwise required by the PO, these documents shall be retained for a period of three (3) years after final payment.

## **QA Clause 11 - Recording and Reporting Inspection and Test Data**

A. All inspection and test data required by the order shall be legibly recorded on inspection data sheets or sketches and shall be traceable to the Buyer's order item with the following information at a minimum:

- FMP Buyer's PO number
- Drawing number and revision (if applicable)
- Nomenclature of part, heat numbers and part serial numbers (if applicable)
- Identification of nonconforming conditions, referencing the Buyer's approval document
- Date of inspection/test
- Signature of inspector who performed the inspection

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Attachment III provides an optional template for recording inspection and test data that may be used at the supplier's discretion.

- B. Completed inspection data sheets shall be available for review by the Buyer representative or Government Quality Assurance Representative (QAR) if such on-site inspection is required by the PO. Hard copies of the recorded data, as described below, shall be submitted to the Buyer at the completion of all PO requirements, unless otherwise required by the PO.
1. All dimensions designated by a delta ( $\Delta$ ) symbol on the drawing or identified in the PO shall be recorded as numerical values.
  2. All three or more place decimal dimensions shown on the face of the drawing shall be measured and recorded as numerical values for each dimension and for each occurrence designated, except for thread dimensions checked with go/no-go thread gages.
  3. All geometric characteristics (concentricity, parallelism, perpendicularity, etc.) shown on the face of the drawing and/or required by the PO, with a feature control value less than or equal to 0.010", regardless of the feature modifier, shall be measured and recorded as numerical values.
  4. All surface finishes shown on the face of the drawing and/or required by the PO, and whose surface finish tolerances are **more** restrictive than the standard drawing tolerances, shall be measured and recorded as a maximum value.
  5. All angles with a tolerance of  $\pm$  30 minutes or less shall be measured and recorded as numerical values.
  6. Threads may be checked with go/no-go thread gages and recorded as "OK to Gage", if the part meets the limit. The major diameter of external threads and minor diameter of internal threads shall be measured and recorded. When threads are measured using the wire method, measure and record the size of wire used, the major diameter, the pitch diameter, and the minor diameter. In addition, the flank angles and lead shall be measured and recorded when the wire method is used.
  7. Any characteristic not included in Items 1-6 above, including two-place decimal dimensions, shall be listed on the data sheet, and if within tolerance, may be recorded as "OK".
  8. Evidence of performance and acceptability of the results of all test requirements shall be recorded, including nondestructive testing and material qualification compliance. Where the involved test yields numerical test values, they shall be recorded.
  9. Inspection results which are not in accordance with PO requirements shall be clearly indicated by either a symbol (e.g., asterisk) adjacent to the recorded result or color coding of the out-of-tolerance data. If the discrepant condition was accepted via a Degradation of Specification Requirements (DSR) Form, the DSR number shall be referenced on the data sheet.
  10. The ambient air temperature at the time the dimensional inspection was performed shall be entered on every page of the dimensional inspection data sheet(s).
  11. A unique identification number of the measuring device(s) used to obtain the measurement shall be entered on every page of the data sheet(s).

All data and information entered on data sheets shall be entered in ink and shall be clear and legible with no write-overs, tape-overs, or obliterations of any type. Erasures are not permitted. Errors requiring correction shall be lined out with a single line and the corrected data entered adjacent to the lined out information. Each change or addition to data sheets shall be initialed and dated.

- C. Provide as-built dimensions as required in the PO and drawings. Hard copies of the recorded data, shall be submitted to the Buyer at the completion of all PO requirements, unless otherwise required by the PO. All dimensions designated by a delta ( $\Delta$ ) symbol on the drawing or identified in the PO shall be recorded as numerical values. Pass/fail is not an acceptable inspection result.
1. Inspection results which are not in accordance with PO requirements shall be clearly indicated by either a symbol (e.g., asterisk) adjacent to the recorded result or color coding of the out-of-tolerance data. If the discrepant condition was accepted via a Degradation of Specification Requirements (DSR) Form, the DSR number shall be referenced on the data sheet.
  2. The ambient air temperature at the time the dimensional inspection was performed shall be entered on every page of the dimensional inspection data sheet(s).
  3. A unique identification number of the measuring device(s) used to obtain the measurement shall be entered on every page of the data sheet(s).

All data and information entered on data sheets shall be entered in ink and shall be clear and legible with no write-overs, tape-overs, or obliterations of any type. Erasures are not permitted. Errors requiring correction shall be lined out with a single line and the corrected data entered adjacent to the lined out information. Each change or addition to data sheets shall be initialed and dated.

### **QA Clause 12 - Personnel and Procedure Qualifications**

The supplier shall submit documentation which provides objective quality evidence that all testing, welding, nondestructive test evaluations, etc., including those activities performed by lower-tier suppliers, will be performed in accordance with procedures that meet the requirements of applicable specifications and/or standards invoked by the PO, and performed by personnel qualified in accordance with the applicable specifications and/or standards. Unless otherwise identified in the PO, the documentation shall be submitted for Buyer approval prior to initiating work and as a minimum include:

- The applicable specifications and/or standards, including revision dates, required by the PO
- The testing organization's name and address, if other than the supplier
- Procedure qualification records
- Personnel qualification records

### **QA Clause 13 - Audits, Surveillances, and Buyer Access to Supplier's Facilities**

The Buyer reserves the right to perform on-site surveillances and/or audits of the supplier and the supplier's lower-tier suppliers systems, facilities, personnel, equipment, and documentation as deemed necessary to ensure conformance with the quality assurance, technical, and contractual requirements of the PO, at no additional cost to the Buyer. The Buyer will provide advance notification of the date(s) planned for any audits and/or surveillances.

### **QA Clause 14 - Buyer Inspections and Release for Shipment**

- A. Items on the PO are subject to mandatory hold points and/or source inspection by the Buyer. The supplier shall provide to the Buyer, on a best estimate basis, a minimum of three (3) working days advance written notice of when the items will be ready for witness, inspection, or review.

- B. When source inspection or other inspections are required, work shall not proceed beyond the inspection point, or shipment shall not be made, until the Buyer has provided written authorization to proceed. This authorization may be provided verbally at the time of the inspection, and will subsequently be documented in writing by the Buyer.

### **QA Clause 15 - Supplier Final Inspection**

Immediately prior to packaging and packing the supplier shall visually inspect 100% of completed components for cleanliness, quality of plating, identification, evidence of handling damage or surface discrepancies. The supplier shall also inspect to provide assurance that the component is compatible with final assembly drawing configuration concerning orientation of parts, correct quantity of parts, completeness of assembly, correctness of installation of locking devices to the extent practicable without requiring disassembly, and for inclusion of correct quantities of associated hardware which are to be shipped unassembled, if applicable.

### **QA Clause 16 - Certifications (General)**

The supplier shall provide certifications in accordance with the PO requirements. Certifications shall contain all of the information listed below (as applicable to the items being certified) and the signature, date, and title of the supplier's authorized representative.

- A. Supplier's name and address
- B. FMP Buyer's PO number
- C. Amendment number(s) to the PO (if applicable to the items being shipped)
- D. Item numbers
- E. Description of PO items
- F. Quantity of each item in the shipment
- G. Specification(s), with applicable revision number, drawing number(s) with applicable revision number, catalog number(s) with applicable revision number, material specification numbers with applicable revision numbers
- H. Approved submittals (when applicable) including Degradation of Specification Requirements (DSRs), Repair Approval Requests (RARs) and Requests for Engineering Change (RECs)
- I. A statement by the supplier certifying that the products and/or services conform with PO requirements; e.g., "(supplier's name)" hereby certifies that the products and/or services described herein meet the requirements of the PO, with the exception of approved RECs, RARs, and/or DSRs."
- J. Date, signature, and title of the supplier's authorized representative

Attachment I provides an optional certification template that may be used at the supplier's discretion.

### **QA Clause 17 - Certificate of Conformance**

The supplier shall certify conformance to all PO requirements via a Certificate of Conformance. The certification shall be based on a review by the supplier, including a sampling of manufacturing and inspection records.

When the supplier has used a lower-tier supplier (including foreign suppliers) for any portion of the work required by the PO, the supplier's Certificate of Conformance shall include a statement identifying that the supplier has completed a review of all documentation received from the lower-tier supplier, including material test reports, inspection and test data, and personnel and procedure

qualification documentation received from the lower-tier supplier for compliance to all applicable codes, specifications, and standards invoked in the Buyer's PO.

When required by the PO, the supplier shall furnish objective quality evidence substantiating the supplier's Certificate of Conformance.

Attachment II provides an optional template for providing a Certificate of Conformance that may be used at the supplier's discretion.

### **QA Clause 18 - Certificate of Usage of Government-Furnished Material**

When material is furnished by the Government (Buyer), the supplier shall certify that there was no substitution of Government supplied materials in completing the PO items and that the materials were used as required by the PO. Material heat numbers (if applicable) shall be included in the supplier's Certification of Usage of Government Furnished Material (GFM).

### **QA Clause 19 - Certificate of Returned Excess Government-Furnished Material**

The supplier shall certify that excess material originally furnished by the Government (Buyer) for use under the PO has not been changed other than dimensionally, unless specifically approved by the Buyer, and is being returned to the Buyer. The certificate is required to be submitted after delivery of all PO deliverables and shall include the information below:

- Quantity, description, and Buyer identification control or heat number for the returned material
- If changed other than physically (i.e., dimensionally), a description of the process (heat treatment, etc.) used, any generated data associated with the process, and reference to the Buyer document(s) that approved the process

### **QA Clause 20 - Transmittal of Certifications, Inspection, or Test Data to the Buyer**

Copies of each document required by the PO shall be supplied to the Buyer in accordance with the following requirements:

- On POs requiring source inspection, one copy shall be provided to the inspector.
- One copy of all documentation shall accompany the shipment.
- One copy of all documentation shall be mailed, concurrent with the product shipment, to the Buyer's Contracts Professional, unless specified otherwise.

### **QA Clause 21 - Material Release**

The supplier shall request the Buyer's approval for the release to procure required materials as identified in the PO.

### **QA Clause 22 - Generic Alloy Testing**

The supplier shall perform generic alloy testing of metallic starting material. The generic identity test shall be performed on all metallic material procured by or supplied to the supplier under the PO, unless otherwise noted. The generic test shall not damage the material. For material in an assembly procured by or supplied to the supplier, generic tests are not required for those parts that are not accessible without disassembly. Results of the inspection shall be identified as "material confirmed to be alloy \_\_\_\_" on the inspection data sheet or certification report.



## **QA Clause 23 - Magnet Check**

By using a known piece of carbon steel as a standard for comparison, the supplier shall conduct and record the results of a magnet check of all stainless steel (300 series), nickel-chromium, iron alloy (Inconel) and Zircaloy materials procured by the supplier to support the requirements of the PO to ensure that carbon steel has not been inadvertently used for the fabrication of the products. Results of the inspection shall be identified as “magnetic” or “non-magnetic” on the inspection data sheet or certification report.

## **QA Clause 24 - Acceptance and Nondestructive Testing (NDT) Documentation**

The following requirements apply when specific NDT is implemented during the fabrication of products. All NDT procedures shall be submitted to the Buyer for approval unless otherwise specified in the PO.

### **A. Radiographic Test Documentation**

Radiographic test procedures shall be submitted to the Buyer when required by the PO.

Radiographic test procedures shall meet the requirements of the radiographic test specification and shall be detailed to the extent that the Buyer is able to determine the adequacy and extent of the testing to be performed.

All radiographs are subject to final review and approval by the Buyer and shall be accompanied by the supplier’s completed radiographic inspection reports and technique sheets. If there are no documentation requirements specified in the radiographic test specification, the test report shall, as a minimum, identify the supplier’s radiographic test procedure employed (including procedure number, date and/or revision number), personnel performing the inspection, the results of the radiographic test, and be submitted with the supplier’s data package to the Buyer, when required by the PO.

The Buyer reserves the right to review the radiographs on its premises or other such places as may be designated in the PO. In such cases, shipment of the radiographs shall be requested of the supplier in writing by the Buyer. Submittal of radiographs, radiographic inspection reports, and radiographic technique sheets shall be by registered mail. The Buyer will assume responsibility for the radiographs to the extent of liability for re-radiography until they are returned to the supplier.

### **B. Ultrasonic Test Documentation**

Ultrasonic test procedures shall be submitted to the Buyer when required by the PO. Ultrasonic test procedures shall meet the requirements of the ultrasonic test specification and shall be detailed to the extent that the Buyer is able to determine the adequacy and extent of the testing to be performed. When additional information such as position charts, sketches, etc., is pertinent, this information shall be submitted with the procedures. Objective evidence of ultrasonic test performance (tapes, traces, charts, etc.) shall be retained by the supplier and shall be made available for review by the Buyer upon request. Documentation of approvals and qualification shall be maintained in the supplier’s records. If there are no documentation requirements specified in the ultrasonic test specification, the test report shall, as a minimum, identify the supplier’s ultrasonic test procedure employed (including procedure number, date, and/or revision number), personnel performing the inspection, and the results of the ultrasonic test including accept/reject disposition and description of indications by size and number, and be submitted with the supplier’s data package to the Buyer, when required by the PO.

C. Liquid Penetrant Test Documentation

Liquid penetrant test procedures shall be submitted to the Buyer when required by the PO. Liquid penetrant test procedures shall meet the requirements of the liquid penetrant test specification and shall be detailed to the extent that the Buyer is able to determine the adequacy and extent of the testing to be performed.

The supplier shall record the results of liquid penetrant inspections when required by the PO. The records shall clearly specify the applicable specification, standard, and acceptance criteria identified in the PO. Documentation of approvals and qualification shall be maintained in the supplier's records. If there are no documentation requirements specified in the liquid penetrant test specification, the test report shall, as a minimum, identify the supplier's penetrant procedure employed (including procedure number, date, and/or revision number), the weld layers inspected, personnel performing the inspection, and the results of the penetrant test including accept/reject disposition and description of indications by size and number, and be submitted with the supplier's data package to the Buyer, when required by the PO.

D. Magnetic Particle Test Documentation

Magnetic particle test procedures shall be submitted to the Buyer when required by the PO. Magnetic particle test procedures shall meet the requirements of the magnetic particle test specification and shall be detailed to the extent that the Buyer is able to determine the adequacy and extent of the testing to be performed. When additional information, such as grid patterns, is pertinent, it shall be submitted with the procedures.

The supplier shall record the results of magnetic particle inspections, when required by the PO. The records shall clearly specify the applicable specification, standard, and acceptance criteria identified in the PO. Documentation of approvals and qualification shall be maintained in the supplier's records. If there are no documentation requirements specified in the magnetic particle test specification, the test report shall, as a minimum, identify the supplier's magnetic particle procedure employed (including procedure number, date, and/or revision number), the weld layers inspected, personnel performing the inspection, and the results of the magnetic particle test including accept/reject disposition and description of indications by size and number, and be submitted with the supplier's data package to the Buyer, when required by the PO.

E. Visual Test Documentation

Visual test procedures shall be submitted to the Buyer when required by the PO. Visual test procedures shall meet the requirements of the visual test specification and shall be detailed to the extent that the Buyer is able to determine the adequacy and extent of the testing to be performed.

The supplier shall record the results of visual inspections, when required by the PO. The records shall clearly specify the applicable specification, standard, and acceptance criteria identified in the PO. Documentation of approvals and qualification shall be maintained in the supplier's records. If there are no documentation requirements specified in the visual test specification, the test report shall, as a minimum, identify the supplier's visual inspection procedure employed (including procedure number, date, and/or revision number), the weld layers inspected, personnel performing the inspection, and the results of the visual inspection including accept/reject disposition and description of indications by size and number, and be submitted with the supplier's data package to the Buyer, when required by the PO.

F. Other Acceptance Testing (e.g. Electrical, Hydrostatic, Helium Leak, etc.) Documentation

Test procedures shall be submitted to the Buyer when required by the PO. The test procedures shall meet the requirements of the test specification and shall be detailed to the extent that the Buyer is able to determine the adequacy and extent of the testing to be performed.

Test reports are required for specific acceptance testing required by the PO. The supplier shall record the results of the acceptance testing. The records shall clearly specify the applicable specification, standard, and acceptance criteria identified in the PO. Documentation of approvals and qualification shall be maintained in the supplier's records. Test reports shall be issued by the organization performing the tests. If there are no documentation requirements specified in the test specification, the test report shall, as a minimum, identify the supplier's testing procedure employed (including procedure number, date, and/or revision number), personnel performing the tests, and the quantitative or qualitative test results for each test of each unit of each order item, and be submitted with the supplier's data package to the Buyer, when required by the PO.

## **QA Clause 25 - Government Source Inspection (GSI)**

Upon receipt of the PO, the supplier shall notify the Government Quality Assurance Representative (QAR) who normally services the facility so that GSI may be performed. The supplier shall include all requirements in all lower-tier supplier POs.

### **A. Facilities, Access and Information Required**

#### **1. Facilities to be Furnished to the Government QAR**

When requested by the Government QAR, the supplier shall provide adequate office supplies, office space, plain office furniture, and storage cabinets for drawings and documents, which meet applicable security requirements for the Government QAR. The supplier shall present products for Government inspection in such a manner as to afford inspection conditions acceptable to the Government QAR.

#### **2. Access to the Supplier's Facility**

The Government QAR may be assigned as an itinerant or resident at the supplier's facility. He/she shall have immediate and free access at all times to all parts of the supplier's facilities utilized in the performance of work on the PO, and shall be permitted to examine and inspect the products, witness the processes of manufacture, and perform quality program and inspection system audits. The Government QAR assigned to the supplier's facility is there on duty in the interest of the PO only in order to protect the interest of the Government. He/she is under no obligation to waive compensation for any injury to person or property sustained in the performance of his/her duties, may refuse to sign a visitor's register or pass which includes such a waiver, or may delete the waiver clause before affixing his/her signature.

#### **3. Information Required by the Government QAR**

The supplier shall furnish or make available to the Government QAR all information that he/she considers pertinent to the proper inspection of the supplies or services required by the PO. This includes copies of contracts, subcontracts, or internal orders on other lower-tier supplier's facilities, schedules, manufacturing processes, QA Program, or any other pertinent data.

### **B. Government Notification Requirements**

- 1. Notification points are steps in the supplier's manufacturing and/or inspection sequence wherein the Government QAR shall be notified. These steps are identified to the supplier by the Government QAR who may require the supplier to submit or confirm notifications in writing. Notifications shall not be bypassed by the supplier unless authorization has been obtained from the Government QAR.**
- 2. Unless otherwise agreed to in writing, the supplier shall notify the Government QAR at least two (2) working days in advance of readiness of inspections and tests designated by the Government QAR as requiring witnessing or inspecting.**

3. If any portion of the PO involving a notification point is to be performed by a lower-tier supplier, the supplier shall notify the Government QAR prior to placing the PO with the lower-tier supplier, to arrange for possible source inspection at the lower-tier supplier's facility.

C. Corrective Action Requests

The supplier shall reply in writing, within the time period requested, to any corrective action requests resulting from Quality Deficiency Reports (QDRs) issued by the Government QAR. The reply shall state the root cause(s) of the deficiency, effect on other components or parts included in the PO, immediate corrective action(s) taken or planned, action(s) taken to prevent recurrence, as well as the methods the supplier plans to use to determine the effectiveness of the corrective actions.

D. Government Authorization to Ship Supplies

Supplies shall not be released for shipment until the Government QAR has signed a Material Inspection and Receiving Report (DD Form 250), or otherwise provides a release by signing and dating the packing list or other supplier shipping papers. At the time of each shipment under a contract or subcontract which specifies GSI, the supplier shall prepare and furnish to the Government QAR, a DD Form 250 or other authorized inspection report form. Inspection report forms will be furnished to the supplier upon request. Supplies shipped without proper authority, or unaccompanied by an inspection report may be returned to the supplier at their expense for inspection, or inspection may be conducted at the destination by the Government, and the cost of inspection may be charged to the supplier.

When the Government QAR requires a DD Form 250 for shipments made under the order, the supplier may obtain assistance in completing the forms from either the Government QAR or the Buyer.

## **QA Clause 26 - Calibration Services of Measurement & Test Equipment (M&TE)**

- A. Calibration of measurement and test equipment (M&TE) provided by the Buyer for recalibration must comply with ISO-10012-1:1992(E), ISO-17025, ANSI/NCSL-Z540, or MIL-STD-45662A requirements. The supplier's certification must identify the calibration specification that was used to calibrate the M&TE. In addition, the supplier's calibration program must make use of appropriate standards traceable to the National Institute of Standards and Technology (NIST) or another nationally recognized standard and a statement of such traceability shall be included in the supplier's calibration certifications. Unless otherwise required by the PO, the supplier's calibration certifications must include the "as-found" calibration measurements for the M&TE being calibrated along with the temperature and humidity readings at the time of the calibration.
- B. Calibration certifications for new M&TE being procured by the Buyer shall conform to Original Equipment Manufacturer (OEM) calibration specifications and does not require "as-found" measurements.

## **QA Clause 27 - Control of Nonconforming Materials and Products**

The supplier shall establish and maintain an effective and positive system for controlling nonconforming materials or products, including procedures for the identification, segregation, presentation, and disposition of reworked or repaired materials or products. Repair of nonconforming materials and products shall be in accordance with documented procedures approved by the Buyer. The acceptance of nonconforming materials or products is the prerogative of and shall be as prescribed by the Buyer. All nonconforming materials and products shall be positively identified to

prevent use, shipment, and intermingling with conforming materials and products. Designated holding areas shall be used by the supplier to segregate nonconforming materials and products.

A “repair” of nonconforming material or product is defined as a procedure which reduces but does not completely eliminate a nonconformance. The repair procedure must be approved for use by the Buyer. The purpose of repair is to reduce the effect of the nonconformance. Proposed repairs approved by the Buyer are authorized for use on a one-time basis only.

“Rework” of a nonconforming material or product is defined as a procedure that will completely eliminate the nonconformance and result in a characteristic that conforms completely to the drawings, specifications, or PO requirements.

### **QA Clause 28 - Document Control**

The supplier shall establish and maintain an effective document control system (Configuration Management System) to ensure that the latest applicable drawings, specifications, procedures, processes, and instructions required by the PO, as well as authorized changes thereto, are used for all work under the PO.

### **QA Clause 29 - Supplier Corrective Action Requests**

The supplier must have an effective program for the investigation of quality system or product deficiencies. The program must include utilization of a disciplined problem solving method for determining the root cause and effective corrective actions that preclude recurrence of deficiencies detected by the supplier or Buyer. The Buyer may forward a supplier Corrective Action Request (SCAR). The SCAR will request a root cause and corrective actions response from the supplier when the Buyer discovers discrepancies for which the supplier is responsible. The supplier shall respond in writing to the SCAR. The supplier’s reply shall state the root cause(s) of the deficiency, the effect on other components or parts required by the PO, the immediate corrective action(s) taken or planned, action(s) taken to prevent recurrence, and methods the supplier plans to use to determine the effectiveness of the corrective action(s).

YOUR COMPANY NAME

Your Company Address  
City, State Zip Code

**CERTIFICATION**

Buyer's Purchase Order No.:  
Purchase Order Amendment No.:  
Line Item No(s):  
Description:  
Quantity:

**APPLICABLE DOCUMENTS**

<u>Specifications</u>					
No.	Rev.	No.	Rev.	No.	Rev.
<u>Drawings</u>					
No.	Rev.	No.	Rev.	No.	Rev.
<u>Catalog</u>					
No.	Rev.	No.	Rev.	No.	Rev.
<u>Material Specifications</u>					
No.	Rev.	No.	Rev.	No.	Rev.

**APPROVED DEGRADATION OF SPECIFICATION REQUIREMENTS (DSRs) as Applicable**

**APPROVED REPAIR APPROVAL REQUESTS (RARs) as Applicable**

**APPROVED REQUESTS FOR ENGINEERING CHANGES (RECs) as Applicable**

*Your Company Name* hereby certifies that the products and/or services described herein meet the requirements of the purchase order, with the exception of approved Request for Engineering Changes, approved Degradation of Specification Requirements, and approved Repair Approval Requests listed above.

_____ Authorized Signature	_____ Title	_____ Date
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YOUR COMPANY NAME

Your Company Address  
City, State Zip Code

**CERTIFICATE OF CONFORMANCE**

Buyer's Purchase Order No.:

Line Item No(s).:

Quantity:

*Your Company Name*, based upon a review of purchase order requirements, including a sampling of manufacturing and inspection records, hereby certifies that the products and/or services described herein are in conformance with all requirements of the purchase order.

*{NOTE TO SUPPLIER: If applicable, add the following. Otherwise, delete this paragraph.}*  
A review of all material test reports, inspection and test data, and personnel and procedure qualification documentation received from lower-tier supplier(s) (including foreign suppliers) for compliance to all applicable codes, specifications and standards invoked in the Buyer's purchase order requirements has been completed.

Objective evidence substantiating this Certificate of Conformance is available to the Buyer upon request.

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

## INSPECTION REPORT DATA SHEET

Part Description	Drawing or Spec. No.	Rev. No.	Group or Item No.
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Buyer's Purchase Order (PO) No.	PO Amendment No.	PO Line Item No(s).
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THE KNOWING & WILLFUL RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTES.

Material Heat No.	Actual Dimensions (If out of Tolerance, Place X in Box to Right of Dimension)						Tool Symbol(s)
Component Identification (P/N S/N) and/or Drawing Dimensions and Tolerances	1	2	3	4	5	6	
	x		x		x		

INSPECTION AMBIENT AIR TEMPERATURE:	TOOLS & GAGES USED	TOOL NO.	CAL DUE DATE (optional)	SYMBOL
				A
				B
				C
				D
				E
				F
				G
				H

**Inspector:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Notes & Comments: List all applicable RARs, RECs, DSRs, etc.

NOTE: WHEN THIS DATA SHEET IS COMPLETED, THE UNUSED BLANKS ON THIS PAGE SHALL BE CONSIDERED N/A.





**LOWER-TIER SUPPLIER CONTROL PLAN**

Supplier's Purchase Order Number	Material, Part, or Component	Service to be Performed by Lower-tier Supplier	Lower-tier Supplier's Name

Applicable Material, Part, or Process Specification or Drawing Number	New or Previously Used Lower-Tier Supplier	Quality Assurance Specification Imposed	Quality System Audit (Last Date/Next Date)	Product Inspection at Source or Receipt (Last Date/Next Date)	Process Surveillance or Process Audit Topic (Last Date/Next Date)

\_\_\_\_\_

Authorized Signature

\_\_\_\_\_

Title

\_\_\_\_\_

Date

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**Instructions for Completing Lower-tier Supplier Control Plan**

The selection of lower-tier suppliers and the nature and extent of control exercised over lower-tier suppliers shall depend upon the type of supply and service, the lower-tier supplier's previously demonstrated capability to perform, and other quality evidence. Initial and periodic oversight of lower-tier suppliers to confirm compliance and effectiveness shall consider the need for quality system audits, product inspection, process surveillance, and process audits. The amount and type of oversight should be based on previous lower-tier supplier history and the criticality and complexity of the supply or service.

**Complete a separate sheet for each lower-tier supplier.**Applicable Material, Part, or Process Specification or Drawing Number

Enter all parts, supplies and services that may be subcontracted. List each part, supply, and service separately.

- (a) Raw material, weld material, forging, and castings, whether commercial or military grade – generic name, and specification number (e.g., stainless steel bar stock, MIL-S-23195; Ni-Cr-Fe Alloy 600 forging, MIL-N-23229; stainless steel bar stock, ASTM A-276; etc.). However, procurements from distributors and warehouses shall be listed on the Warehouse / Distributor Control Plan.
- (b) Finished parts – generic name and, if applicable, controlling specification number (e.g., bolts, MIL-S-24287, etc.). Standard commercial "off-the-shelf" items need not be listed. Distributors and warehouses for military "off-the-shelf" electrical parts shall be listed on the Warehouse / Distributor Control Plan.
- (c) Services – generic name of services and controlling specification number (e.g., miscellaneous machining; chrome plating, QQ-C-320; heat treating, MIL-STD-1684; etc.). Services include any process or operation performed on parts or supplies procured.

New or Previously Used Lower-Tier Supplier

For each item in Column 1, state Previous (P) or New (N) to indicate whether the lower-tier supplier has previously furnished the parts, supplies, or services shown in Column 1.

Quality Assurance Specification Imposed

List all applicable specifications. Enter the quality system requirements document to be applied to each part, supply or service to be subcontracted. Specify either Standard Inspection Clause (per the Federal Acquisition Regulation), MIL-I-45208, ISR-1, ISO 9000, MIL-Q-9858, or other (specify). When an ISO 9000 series quality system is specified, indicate "ISO Certified" if the lower-tier supplier has been reviewed and certified by a third party registrar.

Quality System Audit

Indicate the date of the last on-site Quality System Audit performed by the seller, or by another organization deemed acceptable to the seller, verifying implementation of the Quality Assurance Specification listed in Column 3. If the audit was not performed by the seller, the audit organization shall be listed. Also indicate the date of the next planned Quality System Audit.

Product Inspection at Source or Receipt

Indicate the date of the last on-site Product Inspection and the date of the next planned on-site Product Inspection.

Process Surveillance or Process Audit Topic

Indicate the date of the last Process Surveillance or Process Audit performed at the lower-tier supplier by the seller, or by another organization deemed acceptable, and the name of the process reviewed. If the surveillance or audit was not performed by the seller, the performing organization shall be listed. Indicate the date of the next planned Process Surveillance or Process Audit, and the planned topic.

**WAREHOUSE / DISTRIBUTOR CONTROL PLAN**

Supplier's Purchase Order Number	Material, part, or component to be supplied by a Distributor or Warehouse	Distributor or Warehouse Name

Applicable Material, Part, or Process Specification or Drawing Number	New or Previously Used Distributor or Warehouse	Quality Assurance Specification Imposed	Distributor or Warehouse Rating		
			On Time Deliveries	First Time Quality	Deficiencies/Order

On time delivery rating / First time quality rating  
 3 – Frequently  
 2 – Neither frequently nor infrequently  
 1 – Infrequently

Deficiencies per order rating  
 3 – Numerous  
 2 – Neither few nor numerous  
 1 – Few

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**Instructions for Completing Warehouse / Distributor Control Plan:**

The selection of material suppliers (warehouses / distributors) and the nature and extent of control exercised over material suppliers (warehouses / distributors) shall depend upon the criticality or uniqueness of the raw material or finished part, the material suppliers' (warehouses' / distributors') previously demonstrated capability to perform, and other quality evidence. Initial and periodic oversight of material suppliers (warehouses / distributors) to confirm compliance and effectiveness should be considered. The amount and type of oversight should be based on previous material suppliers' (warehouses' / distributors') history and the criticality or uniqueness of the raw material or finished part being supplied.

**Complete a separate sheet for each warehouse / distributor.**Applicable Material, Part, or Process Specification or Drawing Number

Enter all raw materials or finished parts to be ordered from a warehouse / distributor. List each material purchase separately.

- (a) Raw material, weld material, forging, and castings, whether commercial or military grade – generic name, and specification number (e.g., stainless steel bar stock, MIL-S-23195; Ni-Cr-Fe Alloy 600 forging, MIL-N-23229; stainless steel bar stock, ASTM A-276; etc.).
- (b) Finished parts – generic name and, if applicable, controlling specification number (e.g., bolts, MIL-S-24287, etc.). Standard commercial “off-the-shelf” items and military “off-the-shelf” electrical parts shall be listed.

New or Previously Used Distributor or Warehouse

For each item in Column 1, state Previous (P) or New (N) to indicate whether the supplier has previously furnished the parts, supplies, or services shown in Column 1.

Quality Assurance Specification Imposed

List all applicable specifications.

On Time Deliveries

Enter the rating (1, 2, or 3) for the frequency at which the warehouse/distributor delivers raw materials or finished parts according to the agreed upon delivery time.

First Time Quality

Enter the rating (1, 2, or 3) for the frequency at which the ordered product is delivered without any deficiencies or discrepancies.

Deficiencies/Order

Enter the rating (1, 2, or 3) for the average number of deficiencies per each material order.