

QUALITY REQUIREMENTS AND PROCUREMENT SPECIFICATION (QRPS)



PURPOSE: This specification is provided to outline the general requirements for a Supplier's Quality Control System which will assure the Supplier's compliance with Engineering, Quality, and Procurement specifications to the NavCom Systems, Inc (NSI) Purchase Order.

SCOPE: This specification establishes the general requirements to which the supplier shall conform during performance of manufacturing operations, processes, and services as authorized by the NSI Purchase Order. This specification will be distributed to each NavCom supplier with the Purchase Order.

1.0 GENERAL REQUIREMENTS

- 1.1 Supplier's Organization.** The responsibility for the quality and integrity of the Supplier's product shall be clearly assigned within the supplier's organization. In no event shall quality be sacrificed for cost or schedule.
- 1.2 Inspection System.** Seller shall maintain quality controls that ensure all goods and services conform to contract requirements whether manufactured or processed by seller or procured from Seller's subcontractors or vendors. The Seller is responsible for performing or assuring all inspections, tests, and calibration necessary to substantiate that the goods or services furnished conform to contract requirements. Records of conformance shall be maintained on file at the Seller's facility and made available or provided for review by Buyer upon request. Seller's facilities and quality controls are subject to Buyer review. Seller shall take prompt action to correct conditions that have or could result in goods or services that do not conform to contractual requirements.
- 1.2.1** When the Seller uses sampling inspection or test as a means of product acceptance, the sampling plan shall be statistically valid and appropriate for use. The plan shall preclude the acceptance of lots whose samples have known nonconformities.
- 1.3 Supplier's Procedures.** Operations affecting the quality of the product or service shall be described in detail by written work instructions/procedures and shall be available to and subject to disapproval by NavCom. The supplier shall notify the Buyer of changes in product and/or process definition. Buyer approval of changes is not required unless stated otherwise on the item specification or contract.
- 1.4 Surveillance of Supplier.** NSI reserves the right to conduct surveillance activities at any time during normal working hours, at all facilities involved in the order and to review all applicable records to evaluate the degree of the Supplier's ability to comply with this and other applicable specifications. This right of access by the Buyer shall include the Buyer's customer, and any regulatory authorities. The Supplier shall be subject to disapproval as a NavCom source of supply upon refusal to comply with this paragraph or any other portion of this document. Verification by the Buyer shall not be used by the Supplier as evidence of effective control of quality by the supplier and shall not absolve the organization of the responsibility to provide acceptable product, nor shall it preclude subsequent rejection by the customer.
- 1.5 Certification of Conformance (C of C).** The Supplier shall include with each shipment a Certification of Conformance. The certification shall contain as a minimum: the NSI part number and revision, the purchase order number, the quantity, the signature of the Supplier's authorized signee and the title of the signee. The certification shall state to the effect that the quantity shipped against the subject purchase order is in conformance with the requirements, specifications, and drawings listed on the purchase order. By signing the C of C, the Supplier is also certifying that if materials or services were procured by the Supplier in performance of the NSI Purchase Order, the Supplier shall flow down to their vendors the NSI requirements and have that evidence of C of C's or test reports on file and available for inspection at any reasonable time.
- 1.6 Records.** Seller's records that provide evidence of conformance to specified requirements and the effective operation of the quality system shall remain on file by Seller for the retention period identified below - unless otherwise specified by contract. Seller shall also ensure such records of Seller's Subcontractor(s) shall remain on file by Seller's Subcontractor(s) or Seller for the same retention period.

Additionally:

- Such records [including those retained by Seller's Subcontractor(s)] shall be made available to Buyer, Buyer's Customer(s) including Government and Regulatory Agency authorized representatives.

- At any time during the identified retention period, at Buyer's request, Seller will deliver such records or any part thereof in format / media and within a time frame as agreed to by both parties, to Buyer, at no additional cost to Buyer.
 - At expiration of the retention period, if there is intent to dispose of such records, then prior to disposal Seller shall notify Buyer in writing. Seller shall retain such records on file for a period of not less than 7 years after final payment.
- 1.7 Electrostatic Discharge Control.** The Supplier shall maintain a documented Electrostatic Discharge control program in accordance with DoD-STD-1686 or ESD ADV-2.0-1994 for Electrostatic Discharge Sensitive (ESDS) parts supplied to NSI. The program shall provide for continuous protection of ESDS items from receipt through inspection, test, stocking, marking, packaging, storage, and shipment.
- 1.8 Measurement and Test Equipment Standards.** Measurement and test equipment, used for inspection and acceptance shall be records and be subjected to a visual, dimensional, and operational inspection as applicable when initially received, and at periodic intervals thereafter. The calibration system shall be in accordance with ANSI/NCSL Z540-1-1994.
- 1.9 Inspection and Tests.** The Supplier shall maintain a system for identifying the inspection status of in-process materials, including raw material necessary to manufacture the product. The supplier shall maintain adequate equipment and perform sufficient inspection and test assuring that the article conforms to applicable drawings and specifications in all respects prior to shipment.
- 1.10 Flow-Down of Requirements.** The Supplier shall flow-down all applicable contract requirements to any sub-tier suppliers providing goods or services under this contract.
- 1.11 Material Review.** The seller shall ensure that product which does not conform to product requirements is identified and controlled to prevent its unintended use or delivery. Seller Material Review Board (MRB) authority is not allowed on goods for this contract. Seller shall notify Buyer of any "Repair" or "Use-As-Is" disposition of nonconforming material. Seller must submit all "Repair" or "Use-As-Is" dispositions for Buyer's approval prior to shipment. Seller shall use their rejection system Non-Conformance Report (NCR) to document the nonconforming material. Seller shall contact the Buyer identified on the purchase order and provide at minimum the following information to obtain Buyer disposition.
- 1) Part Number, Nomenclature, Serial/Lot Number(s), and Quantity of nonconforming item(s).
 - 2) Applicable Buyer's P.O. Number, Line Item Number
 - 3) Reference to the Drawings and Specifications, including revisions
 - 4) Complete description and location of nonconformance, including:
 - (a) Actual condition
 - (b) Design (drawing/spec) requirement and tolerance
 - (c) Location of nonconformance (drawing sheet, zone, view, distance from Datum, etc.)
 - 5) Statement of whether or not condition exists on previously shipped goods.
 - 6) Recommended disposition.
 - (a) If Use-As-Is; technical rationale to support the recommendation is required.
 - 7) Corrective Action including;
 - (a) Cause of nonconformance
 - (b) Action taken to preclude recurrence.
 - (c) Effectivity of corrective action by date or serial/lot number.
 - (d) Name and title/position of employee responsible for the corrective action.
- Seller must obtain written authorization from Buyer prior to shipping goods on NCR. Seller shall annotate on shipping document, all NCR number(s) associated with the goods being shipped.
- 1.12 Solderability.** Any material intended to be soldered, such as printed wiring boards, substrates, electronic component leads, etc., shall meet the solderability test requirements of ANSI/J-STD-002 Solderability Tests for Component Leads, Terminations, Lugs, Terminals and Wires or ANSI/J-STD-003 Solderability Tests for Printed Wiring Boards or equivalent within thirty (30) days of receipt at NavCom. **Lead-Free Solder finishes are prohibited.**
- 1.13 Packaging and Shipping.** The Supplier shall provide adequate control of the preservation, packaging, packing, and shipping processes to assure conformance with applicable requirements. The Supplier shall control this operation to assure that the quality of manufactured or processed articles is maintained and that damage, loss, deterioration, and substitution are prevented. Printed wiring boards and substrates shall be packaged in static free bags/containers.

1.14 Rework and/or Replacement of NavCom Rejected Material. Upon reshipment of materials rejected by NavCom, the Supplier is required to state that the shipment contains reworked material and is being returned against a debit memorandum number. List the debit memorandum number on the shipping document. If the material is being returned "as received" it shall be so stated.

2.0 ADDITIONAL QUALITY REQUIREMENTS The following "Quality Clauses" detailed herein are an integral part of the Purchase Order to the extent they are referenced thereon.

Q-4 SOURCE INSPECTION - GOVERNMENT "Government inspection is required prior to shipment from your plant." Upon receipt of this order, promptly notify the Government Representative who normally services your plant so that appropriate planning for Government inspection can be accomplished.

On receipt of this purchase order, promptly furnish a copy to the Government Representative who normally services your plant, or, if none, to the nearest Army, Navy, or Air force Inspection Office in your locality. In the event the representative or office cannot be located, our purchasing buyer should be notified immediately. When material is ready for inspection, or if practicable in advance thereof, notify the Government Representative who normally services your plant. Evidence of Government inspection must be shown in the shipping document.

Q-6 TEST DATA Each shipment shall be accompanied by test data, showing actual test results identifiable with test parameters and products submitted. The data must be signed by an authorized representative of the agency performing the test, and must assure conformance to specified requirements. All measurements must be established within limits that, including possible test equipment error, do not exceed drawing/specification limits.

Q-7 CHEMICAL AND PHYSICAL TEST REPORTS Each shipment must be accompanied by chemical and physical test report(s) identifiable with material submitted. The report(s) must contain the signature and title of the authorized representative of the agency performing the test, and must assure conformance to specification requirements.

Q-9 COUNTERFEIT PARTS PREVENTION The Seller shall offer only new material. Parts suspected of being salvaged, reclaimed, otherwise used or altered from the configuration delivered by the Original Component Manufacturer will be rejected. The Seller shall satisfy one of the following requirements:

(a) Seller shall provide a traceable copy of the Original Component Manufacturer's certificate of conformance for each date code offered.

(b) Seller shall provide test data for all screening tests required by the device drawing specified on the purchase order. In addition to the test data, a sample of one device from each date code offered for sale shall be de-lidded for visual verification of device construction. A de-lid inspection report including a micro-photograph of the die shall be included with the delivery. Magnification used shall be sufficient to distinguish marking and topography features of the die.

If counterfeit parts are furnished under this purchase agreement, such items shall be impounded. The Buyer is not under obligation to return suspect or confirmed counterfeit parts. Instances of suspect or confirmed counterfeit parts will be reported to the Government Industry Data Exchange Program (GIDEP).

Q-11 X-RAY REQUIREMENTS Items requiring radiographic inspection will be submitted to a NavCom approved X-Ray Laboratory and processed in accordance with applicable specifications and standards. Findings will be reported on an appropriate form, including the name of the reader and the signature of a responsible laboratory representative. The x-ray film and a legible reproducible copy of the report must accompany the material. An adequate method of identifying the cross-referencing each film exposure, report and item must be provided. When parts are serialized, serial numbers must appear on the report.

Q-23 SHELF LIFE CONTROL Products which deteriorate with age, such as rubber, plastics, epoxies, cements, chemicals, and rubber products with adhesive backing, etc. shall be marked with the date age control expires, for both material and adhesive. Rubber Material, sheets, strips, extrusion, etc., shall be marked with the expiration date on each piece. Rubber parts shall be packaged in plastic bag containers, with the expiration date indicated on each container. Epoxies, cements, chemicals, plastics, etc., shall be marked on each can, bottle, tube, etc., with expiration date unless otherwise specified. The C of C shall include the expiration date. ***No products will be accepted with less than one-half the shelf life remaining at the time of receipt.***

Q-24 SOURCE INSPECTION – NAVCOM "NSI inspection is required prior to shipment from your plant." When material has completed your final inspection and is ready for source inspection, notify NSI's Buyer so that appropriate planning for NavCom inspection can be accomplished.

- Q26 ORIGINAL EQUIPMENT/COMPONENT MANUFACTURER CERTIFICATION** The supplier shall include with each shipment, a copy of all acquisition traceability documentation (C of C's or Packing Slips) provided by the Original Equipment/Component Manufacturer and all previous distributors within the supply chain for all material contained in this shipment.
- Q-39 FIRST ARTICLE INSPECTION** Seller shall perform a First Article Inspection (FAI) per requirements of specification SAE AS9102 at first production run and shall perform a comparable inspection at production change points or for specified articles following inspection tooling changes, design changes, or evident Quality degradation. This includes all details and sub-assemblies, which constitute the end item ordered. When documenting the FAI, the Seller may use the forms contained within the SAE AS9102 specification or their equivalent, so long as the forms contain all the information required by SAE AS9102. Seller will include results of FAI with shipment of deliverable product to Buyer.
- Q-40 WAFER LOT APPROVAL** Evaluation and approval of each wafer lot is required prior to delivery of production quantities. The appropriate number of samples, as specified in the Wafer Lot Approval plan shall be delivered for evaluation. Data shall also be delivered with the samples for any testing required by the NavCom drawing. Subsequent procurement of devices from an approved wafer need not be subjected to this testing.
- Q-41 DFAR SPECIALTY METALS CERTIFICATION** Supplier shall provide objective evidence that specialty metals incorporated in item delivered under this order were melted or produced in the United States, its outlying areas, or a qualifying county in accordance with *DFAR 252.225-7009 Restriction on Acquisition of Certain Articles Containing Specialty Metals*.