



Procurement Quality Clauses Procedure

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APPLICABLE AS9100/Q9001-2000 PARAGRAPH 7.5.1.1

APPROVALS	Ron Edmon, Director of Quality Assurance	DATE: 10/3/01
	Rolf Meima, Supplied Base Director	DATE: 10/3/01
	Dennis Dethelsen, Facilities Manager	DATE: 10/3/01

REVISION HISTORY

REVISION	ECN	APPROVAL	DATE
A	1395	SKB	10/03/01
B	5118	OW	08/22/03
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F	9225	PW	10/24/07
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H	9583	PR	6/11/08

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1.0 PURPOSE

This document establishes the procurement quality clauses (Q Clauses), which are applicable to Endwave's purchases to the extent specified in the procurement document.

2.0 SCOPE

This procedure applies to all procurement documents for processes, material, parts, testing analysis and/or services used to produce contract deliverable items and program unique test equipment.

3.0 SPECIFICATION OWNER

Quality Assurance

4.0 REFERENCE DOCUMENTS

106-0007-001 Control of Quality Records
100-0014-001 Critical Materials and Services, Procurement Requirements

5.0 DEFINITIONS

"Q" Clauses – Quality clauses that are applied to purchase orders and flowed down to Endwave Suppliers.

6.0 RESPONSIBILITIES

The Quality Assurance Manager is responsible for maintaining this document. Supply Chain Management and the Quality Assurance Manager will approve changes to this document.

7.0 PROCEDURE

7.1 Quality Assurance is responsible for reviewing all critical and contract-traceable procurement requisitions and identifying appropriate quality requirements via assignment of quality clauses to document 100-0014-001. The Endwave buyer shall assure that a copy of 100-0014-001 accompanies procurement documents containing quality clauses or informs supplier of on-line location. Note: This clause is applicable to all new suppliers who are not familiar with Endwave Quality Clauses. It is not necessary to issue a copy of 100-0014-001 to suppliers who have been issued a previous copy unless a new revision to this document is released. The Supply Chain Management Department shall coordinate the review and/or approval activities of submittals required by the applicable Q clauses.

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7.2 The following Q clauses are a requirement of the procurement document when expressly specified by clause number. The first clause, Q1 (which includes multiple parts,) is intended to be standard and applies to all of the purchase orders for items used in the manufacture of Endwave products. The other clauses will be applied as necessary, depending on the item being ordered and the capability of the supplier. In the event that a clause cannot be met, the Endwave Supply Chain Management Department shall be notified immediately.

8.0 RECORDS

All purchase orders are considered quality records.

Records will be retained in accordance with 106-0007-001, Control of Quality Records.

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PLEASE RETAIN THIS PAPER FOR REFERENCE ON FUTURE ORDERS.

**Q1 GENERAL QUALITY ASSURANCE REQUIREMENTS
(Include paragraphs A through L below)**

A. Quality System: The supplier shall maintain a quality system and provide inspection which is adequate to insure that all materials delivered against this procurement document meet all specified requirements.

Inspection: The supplier's quality system is subject to Endwave audit verification at any time during fulfillment of this order. The supplier shall maintain an inspection system adequate to assure that supplies shipped on this order meet all of the applicable requirements. The system shall also provide for the maintenance of records and data for all inspections and tests performed and shall make these records available for examination and verification by Endwave upon request.

Resubmittal of Rejected Items: Any item rejected by Endwave and subsequently resubmitted by the supplier shall be clearly identified as a resubmitted item, indicating the procurement document number and Endwave's rejection document number on the supplier's certificate of conformance.

Notification of Facility Change: Supplier shall not use nor relocate any Endwave approved production, manufacturing, and/or processing facilities during performance of the work specified in the procurement document. Endwave's Supply Chain Management Department shall be notified in writing prior to performance against the procurement document and afforded an opportunity to examine and approve any such facility changes for compliance with procurement quality requirements.

Changing of Test Facility: Supplier shall not change a test facility nor use another test facility to meet specification/drawing requirements without prior written approval from the Endwave Supply Chain Management Department, if a specific test facility was previously approved by Endwave as provided for in the procurement document.

Change of Management/Ownership: Supplier shall notify the Endwave Supply Chain Management Department in writing when a significant change in management or ownership has occurred.

B. Endwave/Endwave Customer Right of Entry:

Endwave and Endwave's customers reserve the right to inspect any or all of the work in this order at the supplier's location. In addition, the supplier's quality and manufacturing processes are subject to review by authorized Endwave representatives at any time during production

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C. Workmanship

All items on this order shall be fabricated and finished in a thorough, high quality, workmanship-like manner. Particular attention shall be given to cleaning, absence of blemishes and foreign material, identification, and general appearance.

D. Technical and Non Technical Requirements & Deviations

All technical and non-technical requirements as outline or defined by the pertinent drawing and or material specification shall be specifically and strictly adhered to by the approved supplier. No deviations from the specified requirements are permitted without either a revision to the procurement document or written approval from the Endwave Supply Chain Management Department. The supplier shall notify in writing and obtain written approval from the Endwave Supply Chain Management Department for proposed changes in the design or processes of their products, whenever such changes affect applicable Endwave orders.

E. Inspection at Endwave

All material is subject to sampling or 100% inspection at Endwave. Discrepancies found within a sample can cause rejection and return of an entire shipment. Acceptance of incoming material does not preclude discovery and return of discrepant material at a later date.

F. Approved Suppliers

Endwave maintains a list of approved suppliers. These suppliers are qualified by audit results and are subject to continuing performance measurements based on both conformance to requirements and delivery performance. Late shipments or the shipment of discrepant material will affect a supplier's approval rating, and can cause disqualification.

G. Non-Conforming Material

Shipment of non-conforming material may cause the generation of a Corrective Action Request (CAR), which must be answered promptly and satisfactorily. Failure to do so can cause removal from the Approved Supplier List.

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H. General Compliance

The supplier shall certify that all materials, processes and/or finished items supplied under this order are as specified. One copy of each certification document specified below shall accompany each shipment. Certifications shall be signed by a responsible member of the supplier's firm. Each certification shall identify the Endwave procurement document and shall identify the part, serial number and lot number of the items covered by the certification. Material received without certification will be rejected and returned at supplier's expense.

I. Calibration

The supplier shall maintain a calibration system in accordance with MIL-STD-45662, "Calibration System Requirements" or ANSI Z540-1 or equivalent.

J. Limited Shelf-Life Material

The supplier shall identify all materials and articles, which have definite characteristics of quality degradation with age and/or environment. The supplier shall affix this information directly on the material container or article. The supplier shall identify the container with the start date of useful life and the date on which useful life is expended. When environment is a factor in determining useful life, the identification shall include the storage conditions (i.e., temperature, humidity, etc.) required achieving the stated life. A minimum of 75% of the applicable material/article shelf life shall remain upon receipt of the material by Endwave or the material is subject to rejection and return to the supplier.

K. Quality Records and/or Data

Objective evidence of chemical and physical reports, certifications, inspections, test, engineering changes and other quality and/or engineering data shall be retained and subjected to review at any time by Endwave:

A) For not less than four (4) years after final payment on the procurement document, unless otherwise requested by Endwave.

B) For not less than seven (7) years after final payment on the procurement document, unless otherwise requested by Endwave.

* Selection A is the default unless otherwise specified.

L. Packaging

Unless otherwise specified by the item drawing, specification or procurement document, packaging shall meet the following requirements:

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GENERAL: The supplier is responsible for assuring that all items are delivered without damage or deterioration and are efficiently and economically packed for the method of transportation and type of handling involved. Unit and intermediate packaging shall be employed as necessary to prevent damage or deterioration.

IDENTIFICATION: Each shipping container and intermediate package shall be identified with:

- Procurement document number
- Part Number/Drawing Number and Revision (when applicable)
- Quantity
- Manufacturer name (if known)
- Manufacture date (if known)
- Serial number (when applicable)
- Lot number (when applicable)
- Cure date (when applicable)
- Expiration dates (when applicable)
- Static sensitive warning (when applicable)
- Cautionary Handling Instructions (when applicable)

M. MSDS – Material Safety Data Sheets shall be included in each shipment of materials or chemicals that contain an MSDS.

Q2. Certificate of Compliance

Supplier shall submit with each shipment a Certificate of Compliance, which certifies that the material or parts furnished have been manufactured in accordance with Endwave's drawing and revision as specified on the procurement document. The certification must specifically contain:

- Endwave Part Number/Drawing No. and Revision (when applicable)
- Endwave procurement document number
- MIL-SPEC number (when applicable)

In addition, the supplier must state in the certification that objective evidence sufficient to substantiate the Certificate of Compliance is on file and is available for Endwave review. The Certificate of Compliance must be signed by a duly authorized representative of the supplier's quality function. One (1) reproducible copy of the Certification of Compliance shall be supplied to Endwave concurrently with each delivery of article(s). Certificate of Compliance from distributors shall comply with all of the above requirements.

Q3. Physical or Chemical Test Report

Each shipment must be accompanied by a legible and reproducible copy of a physical or chemical test report identifiable with specification test requirements and material submitted. These reports must contain the signature of a responsible representative of the agency performing the test and must assure conformance to specification requirements.

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Q4. Special Process Certification

The supplier shall be responsible for conformance of their outside manufacturer and/or processors to the applicable specifications. Each shipment shall be accompanied by a legible and reproducible copy of certification to the applicable specifications such as those specifications regarding but not limited to, heat treat, chemical treat, plating, welding, etc. Certifications must show specification number, revision letter, and quantities affected by this certification, also the agency performing the outside service.

Q5. Dimensional Data

Recorded findings on all critical dimensions shall be submitted. Critical dimensions are defined as those dimensions, which would have an adverse effect on the next higher assembly if tolerances are not maintained.

Q6. Off-The-Shelf/Catalog Item

Inspection Data: One (1) copy of the item drawing of applicable catalog page shall accompany parts for receiving identification and inspection.

Q7. Test and Inspection Data

Inspection measurements and/or electrical test results of items on this procurement document shall be taken and included with each procurement document shipment. Actual data to be recorded shall be as specified in the detail specification/drawing. The supplier shall assure that products failing to meet performance requirements are not shipped to Endwave. As a minimum test data shall include:

- Endwave Part number/Drawing number and revision
- Endwave procurement document number
- Supplier Acceptance Test procedure number (as applicable) and revision date
- Characteristic(s) measured
- Date and test completion
- Evidence of test acceptance by supplier's quality function

Q8. Inspection and Test Instructions

The supplier shall prepare and maintain written instructions for inspections and tests performed on the procurement document. The instructions shall include identification of the item to be inspected or tested, measuring and test equipment to be used, details of inspection and test operations to be performed, and the criteria for determining conformance or non-conformance to procurement document requirements.

A) One legible and reproducible copy of each instruction shall be submitted to the Endwave Quality Assurance Department for approval prior to use.

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B) The instructions shall be available on file for review by Endwave and cognizant Government agencies. Changes to the approved Inspection and Test Instructions shall be submitted to the Endwave Quality Assurance Department for approval prior to incorporation.

Q9. Source Inspection-Endwave

Items covered by this procurement document require inspection and/or test by Endwave at the supplier's plant. The supplier shall give a minimum of a 48-hour notice prior to required inspection. Endwave source inspection and/or test does not relieve supplier of any of the requirements of the procurement document, and Endwave reserves the right to accomplish final acceptance at Endwave's facility.

Q10. Source Inspection-Government

Government inspection at the supplier's facility will be required prior to shipment. Upon receipt of this order, promptly notify the government representative who services your facility so that appropriate planning can be accomplished. The supplier shall give a minimum of a 72-hour notice prior to required inspection. Evidence of Government Source Inspection approval is required with each shipment.

Q11. Traceability

All items supplied under this procurement document shall be traceable to the raw materials used. If not supplied with the material, the information shall be made available to Endwave upon request.

Q12. Endwave First Article Inspection

This order is subject to the approval of a First Article sample at Endwave. Supplier should deliver one sample, which represents in all aspects, the items to be delivered, and await approval before shipping the remainder of the order. Manufacture of the remainder prior to the First Article Approval is at the risk of the supplier.

Q13. Supplier First Article Inspection

(To be entered by SCM on an as-needed basis)

The supplier shall create or select a first article inspection sample, and perform a complete inspection to all drawing requirements. The First Article Inspection Report shall accompany the product upon delivery and the part the first article was performed on shall be appropriately identified in the delivery.

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Q14. ESD Sensitive Material

All components which are Electro-Static Discharge (ESD) and/or electromagnetic forces (EMF) sensitive must be processed and packaged in accordance with MIL-STD-1686, "Electrostatic Discharge Control Program" or ANSI/ESD S20.20, "Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices)."

Q15. Inspection System MIL-I-45208 or ISO 9003

The supplier's Inspection System shall provide and maintain a system that conforms to the requirements of MIL-I-45208, "Inspection System Requirements" or ISO 9003, "Quality Systems – Model for Quality Assurance in Final Inspection and Test". Compliance with the provision of this clause in no way relieves the supplier of the final responsibility to furnish acceptable supplies or services as specified herein. The system shall be subject to audit by Endwave.

Q16. Quality System MIL-Q-9858, ISO 9001 or ISO 9002

The supplier's Quality System shall provide and maintain a system that conforms to the requirements of MIL-Q-9858, "Quality Program Requirements", ISO 9001, "Quality Systems – Model for Quality Assurance in Design/Development, Production, Installation and Servicing", or ISO 9002, "Quality System – Model for Quality Assurance in Production, Installation and Servicing." Compliance with the provision of this clause in no way relieves the supplier of the final responsibility to furnish acceptable supplies or services as specified herein. The system shall be subject to audit by Endwave.

Q17. Limited Shelf-Life Material

Incorporated into Q1J

Q18. Calibration Services

The supplier of calibration services shall provide certification that such services were accomplished utilizing standards traceable to National Institute of Standards and Technology, been derived from accepted values of natural, physical constants or been derived by the ratio type of self-calibration techniques and their system is compliant to MIL-STD-45662 or ANSI Z540-1.

Q19. Equipment Designated for Endwave Calibration Recall System

This clause applied to equipment that is purchased to perform an acceptance test of deliverable hardware or to measure/verify a process parameter as specified in a procedure used to manufacture deliverable hardware.

The supplier shall deliver the following information to Endwave:

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- Identification of the calibration items and parameters.
- Certification of current calibration status of these items.
- Methods/Procedures for calibration of these items.
- Recommended calibration recall intervals for these items.

This information is subject to review and approval by the Endwave Calibration Organization prior to acceptance of equipment shipped under this clause.

Q20. Inspection and Test Plan

The supplier shall prepare and maintain an inspection and test plan including a product flow chart of operation sequences, inspection and test points, and process control points for the items to be fabricated on this procurement document. Type of inspection or test at each point must be sufficiently described and identified.

- A) One legible and reproducible copy of each instruction shall be submitted to the Endwave Supply Chain Management Department for approval prior to the start of fabrication. Changes to the approved Inspection and Test Plan shall be submitted to the Endwave Supply Chain Management Department for approval prior to incorporation.

Q21. Configuration Management

The supplier shall employ a configuration management program to demonstrate that the purchased item conforms to controlled documentation. It is intended that the supplier implement only the degree and depth of configuration control necessary to establish approved baseline definition, control changes to the baseline, and record the status of the changes to ensure compatibility with the Endwave specification and applicable drawing. The supplier shall ensure adequate configuration management practices are in place at their subtler suppliers to ensure that part design, material, and processes do not change from original part design and procedures.

Q22. Configuration Control

Prior to the start of production, Endwave may review, at the supplier's site, all documentation to be used to produce the items described in the Endwave specification and/or source control drawing. This includes process documentation and inspection/test procedures. After review of the documents, a list will be established with the document titles and current revisions. The document list shall be submitted to the Endwave Supply Chain Management Department for approval. The documents on this list will be considered the baseline. Changes to any of the documents on this list must be submitted in writing to the Endwave Supply Chain Management Department for approval as follows:

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Class I changes (changes that effect deliverable hardware form, fit or function): Proposed Class I technical and manufacturing changes to the baseline shall be submitted for approval following establishment of the approved baseline. Proposed Class I changes shall be submitted to Endwave as Engineering Change Proposals (ECP's) via appropriate change forms before action is taken to implement the changes with Endwave approval. The ECP shall include a brief title of the proposed change and date, description, justification and impact.

Class II changes (changes not effecting deliverable hardware form, fit or function): Proposed Class II changes shall be submitted to Endwave for classification concurrence following establishment of the approved baseline. The proposed change shall include a brief title of the proposed change and date, description, justification and impact.

Definitions of Class I and II changes and those changes not requiring Endwave change approval or classification concurrence shall be provided in the supplier's Quality Assurance Manual. The supplier's Quality Assurance Manual shall be submitted to the Endwave Supply Chain Management Department for approval prior to submission of any changes.

Q23 Life Requirements

Endwave engineering shall provide life requirements for procured components and subassemblies. These requirements are derived from Endwave's customer specification(s) and or sales contract(s). Suppliers will provide empirical data demonstrating life requirement conformance.

Q24 Overseas Drop Ship Requirements

(to be added by buyers on PO through standard text)

Each Shipment overseas must include the following:

- **Packing Slip**
- **Invoice**
- **Copy of actual Air Way Bill (AWB)**

In addition to including the documents with the shipment, please e-mail all of the above to the appropriate Endwave buyer and Hana. (refer to Drop Ship Procedure Letter) SCM24.

Q25 "The attached Technical Data/Software may be covered by the United States Munitions List (22 C.F.R. 121.1) under Category XI(d), any export/transfer/disclosure of the technical data to a foreign person, must be licensed by the Directorate of Defense Trade Controls, United States Department of State, prior to disclosure or transfer to the foreign person, whether in the United States or abroad."

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- Q26** Specialty Metals
(applies only on shipments made to Endwave's United States locations)
Compliance to DFAR 252.225-7014 "Preference for Domestic Specialty Metal" when providing any items containing specialty metals as listed in the document.
- Q27** Wafer Qualification
Where deemed necessary, Semiconductor samples will be evaluated at Endwave and upon approval of the wafer qualification, a percentage of the wafer (as defined by the Endwave Purchasing Department and the vendor) shall be reserved and held by the supplier for purchase.

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