

## Quality Assurance Manual - Appendix 7.4.1

### SUPPLIER QUALITY REQUIREMENTS

QMA-7.4.1, Rev. 10, 3/27/13

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#### 1.0 PURPOSE

To establish supplier quality requirements applicable to the type of product or service procured by TECO-Westinghouse Motor Company (TWMC).

#### 2.0 APPLICATION

When QAM Appendix 7.4.1 is specified on the purchase order, suppliers must implement a quality system appropriate to the product and services supplied.

The following lists the supplier quality requirement (SQR) code and application by the type of commodity. Suppliers should refer to the following table to determine the appropriate SQR code, then refer to the applicable section of this document for detailed supplier quality requirements.

Supplier Quality Requirements Table

Code	Commodity Application
SQR100	Commercial Products and Services
SQR200	Nuclear Products and Services
SQR300	Government Products and Services
SQR400	Testing Laboratories
SQR500	Measuring and Test Equipment Calibration and Repair Services
SQR600	Distributor and Catalog Suppliers
SQR700	Transportation Services
SQR800	Training and Consulting/Services
SQR900	Motor Service and Repair Activities

Suppliers who have achieved ISO accreditation will, after approval of requested documentation, receive approvals for the applicable SQR code(s), excluding SQR200.

#### 3.0 SUPPLIER DEVIATION REQUESTS

##### 3.1 General

TWMC recognizes that Design for Manufacturability (DFM) product and process improvements or nonconforming conditions may occur during the manufacture of product as a result of either TWMC and/or supplier errors. The Supplier Deviation Request (SDR) system was established to address improvements, problems and nonconforming conditions detected by the supplier. The SDR system also provides the supplier with the means for recommending product or process improvements.

The SDR system should be used for the following situations:

- Drawing errors noted during initial contract review or during manufacturing and inspection activities.
- Specification errors noted during contract review or processing.

- Supplier product or process nonconformance detected during the manufacture or inspection of product.
- Product or process improvement opportunities identified during contract review or manufacturing.

### **3.2 Procedure**

When a condition is observed which requires an SDR, the supplier shall utilize one of the following options for submittal to TWMC.

- E-mail Version - Fill in the appropriate spaces on the electronic version of the SDR form and e-mail the document to Quality Assurance with a copy to the Supply Chain Buyer who placed the purchase order.
- Paper Version - Fill in the appropriate blocks on the SDR form TWMC-107 and FAX the document to Quality Assurance with a copy to the Supply Chain Buyer who placed the purchase order. The fax number for QA is provided on the SDR form.

Upon receipt of an SDR, TWMC will initiate an Error Appraisal Notice (EAN) and assign the EAN number to the SDR as the document control number. SDRs are processed internally using the on-line EAN system. After disposition of the SDR/EAN document, TWMC QA will return to the Buyer and Supplier, via fax or e-mail as appropriate, the SDR and EAN for action by the supplier. The Supply Chain Buyer will revise the purchase order line item text fields with the EAN number to indicate that an SDR has been processed for the product. This action assures that TWMC Receiving Inspection evaluates the product based on the Purchase Order and any authorized deviations as documented on the SDR.

Suppliers are not authorized to ship nonconforming product prior to disposition and completion of the instructions stated in the SDR.

## **4.0 REVISION STATUS OF DRAWINGS AND SPECIFICATIONS**

The Supply Chain Buyer and Supplier share responsibility for assuring the correct revision level of drawings and specifications are available and applied to the procured product or service. This responsibility extends to sub-tier documents referenced on the drawings or within the specifications.

The TWMC Purchase Order references the item to be procured and the current revision level. When applicable, the Buyer will also reference sub-tier drawings and/or specifications and the appropriate revision level on the Purchase Order. The Supply Chain Buyer provides or assures the Supplier has the correct document revision level of each required drawing or specification.

The Supplier is responsible for assuring availability and application of the required drawings and specifications to the appropriate revision level. If the correct revision level of a drawing or specification is not available, the Supplier should contact the Supply Chain Buyer.

To assist Suppliers with the maintenance of Process Specifications (PS) and Engineering Material Specifications (EM Specs) or Material Cards, TWMC provides the following options for acquiring a list of specifications with revision levels:

- The Supplier Information page on the TECO-Westinghouse Motor Company Internet web site at <http://tecowestinghouse/resources.aspx> provides access to current indexes of TWMC documents. The specification lists may be printed using an appropriate web browser.

- Requests for a copy of the master list may be directed to either the Supply Chain Buyer or Quality Assurance. The lists will be mailed, e-mailed or faxed to the supplier.

## **5.0 IDENTIFICATION AND MARKING OF PARTS, MATERIAL & COMPONENTS**

Parts, material and components supplied to TWMC must be identified so that identity can be maintained at all times. Instructions for methods of marking may be specified on engineering drawings, engineering material specifications, quality procedures, manufacturing process specifications, or TWMC purchase orders.

Where size permits, items shall be permanently identified. Where physical identification on the item is either impractical or insufficient, physical separation, procedural control, or other appropriate means shall be employed. Small items may be individually tagged or identified with labels attached to the boxes or containers.

The minimum identification of material shipped to TWMC must include the following:

- TWMC Purchase Order
- Manufacturer's Name
- Part or Drawing Number and Revision

Identification markings, when used, shall be applied using material and methods which provide a clear and legible identification and do not detrimentally affect the function or service life of the item. Markings shall be transferred to each part of an identified item when subdivided and shall not be obliterated or hidden by surface treatment or coatings.

Methods for identification and marking of parts include vibrating marking tools, electro-chemical etch, low stress die stamps, cast numbers, and permanent paint markers. Materials that require heat or lot traceability, heat or lot numbers shall be identified on the material if possible and recorded on the certifications. Additionally, any items that are age-sensitive or have limited shelf-life must be identified.

Frame and other heavy steel fabrications shall have the following information permanently identified by low stress die stamps:

- TWMC Purchase Order Number
- Part or Drawing Number and Revision
- Serial Number if applicable
- TWMC Shop Order Number if available
- Manufacturer Name or Logo

## **6.0 SUPPLIER QUALITY RATING**

TWMC rates suppliers twice each year for Quality. The rating is calculated based on submitted lots and number of EANs charged to the supplier for defective product or services, including documentation deficiencies.

For the top 80% of spending or mission-critical suppliers, a scorecard will be used which also tracks 1) the number of supplier Corrective Action Requests and 2) the total number of items on an EAN versus the number of items received.

SDRs submitted for drawing or specification errors are charged to the responsible Engineering or Manufacturing Engineering functions.

SDRs are charged to the supplier when the nonconforming condition was caused by the suppliers manufacturing and documentation processes or those of their subcontractors.

Qualified suppliers for Nuclear product and services shall receive an annual review to document changes to the organization's workscope and quality system.

## **7.0 DISPUTING EAN CHARGES**

Supply Chain Buyer and Procurement Engineer review all EAN charges assigned to suppliers. Purchasing and Quality Assurance routinely review EANs to assure that the assigned charges are appropriate. Copies of the EAN(s) are sent to suppliers by Supply Chain Buyer for review and feedback.

Suppliers who are charged with responsibility for nonconforming product and who, upon review, believe that the charge is incorrect, are encouraged to contact Supply Chain or Quality Assurance to dispute the charges. TWMC Quality Assurance will review and respond to each case presented by the supplier.

Records of the disputes and responses are maintained by TWMC Quality Assurance in the comments section of the EAN database.

## **8.0 SUPPLIER QUALITY REQUIREMENTS - DEFINED**

### **8.1 SQR100 - Commercial Products and Services**

#### **8.1.1 Quality Management System, General Requirements (QAM 4.1)**

The supplier shall prepare a quality manual and procedures covering the requirements of SQR100. The manual shall outline the structure of documents used to implement the Quality Program. The range and detail of procedures that form the quality program should be based on the skills and training of personnel, the methods used and complexity of the work or product.

#### **8.1.2 Control of Records (QAM 4.2)**

##### **General**

The supplier shall establish a documented procedure for defining the controls needed for the identification, storage, protection, retrieval, retention & disposition of records.

The supplier shall maintain adequate quality records which may include, but are not limited to:

- management reviews,
- audit reports,
- inspection and test records,
- calibration records,
- nonconformance reports,
- corrective/preventive actions,

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- material certifications,
- process qualifications and certifications,
- personnel qualification records,
- design reviews, if applicable.

Quality records shall be made available for review at any time during the manufacturing cycle and shall be maintained on file for a minimum of six months after shipment of the product.

#### **Certifications**

Certificate of Compliance or Certification to test results, as required by purchase order, drawing or specification must accompany each shipment and include the following identifying data:

- Must be on Company letterhead
- Supplier name
- Manufacturer's name and address (if different from above)
- TWMC purchase order number and line item(s)
- Drawing number and revision
- Quantity
- Manufacturers lot number (if applicable)
- Heat number(s) (if applicable)
- Specification number(s) and revision (if applicable)
- Supplier Deviation Request number (if applicable)
- Test results (as required)
- Statement of compliance or conformance to specified requirements

Certification(s) must contain the date, name and title of responsible, authorized agent of the supplier's company.

#### **Submittal of Documents**

All quality records provided by the supplier shall be traceable to a TWMC purchase order. Forward documents electronically to the TWMC Supply Chain Buyer and to QA at qa@tecowestinghouse.com, with the PO number and line number in the Subject line. When practical, a copy will also be sent with the item.

If electronic transmittal is not available, please mail to:

TECO-Westinghouse Motor Company  
5100 N. IH-35  
Round Rock, Texas 78681  
Attn: Quality Assurance - Records

#### **8.1.3 Control of Documents (QAM 4.2.3)**

The supplier shall maintain a documented procedure for control of data and documents which provides the following:

1. The correct revision level of the documents are available and used,
2. Obsolete documents are either removed from circulation or properly identified and controlled to prevent unintended use.

**8.1.4 Management Commitment (QAM 5.1)**

8.1.4.1 Top management shall provide evidence of its commitment to the development and implementation of the quality management system and its effectiveness by:

- communicating importance of meeting customer as well as statutory & regulatory requirements
- establish quality objectives
- conduct management reviews
- ensure availability of resources

8.1.4.2 Management Review

Top management shall review the organization's quality management system at planned intervals to ensure its continuing suitability, adequacy and effectiveness. This review shall include assessing opportunities for improvement and the need for changes to the quality management system. Records from the management review shall be maintained.

The organizational structure should be clearly stated with lines of authority and communication defined.

**8.1.5 Customer Focus (QAM 5.2)**

The supplier shall conduct a review, as appropriate, of the contract requirements prior to acceptance of an order to assure they have the capability to satisfy the requirements.

**8.1.6 Design & Development (QAM 7.3) (if applicable)**

The supplier shall maintain documented procedures to control and verify the design of product in order to ensure that the specified requirements have been met. The design control system should address the following activities:

- Design and Development Planning,
- Organizational and Technical Interfaces,
- Design Inputs,
- Design Outputs,
- Design Reviews,
- Design Verification,
- Design Validations, and
- Design Changes.

**8.1.7 Purchasing (QAM 7.4)**

The supplier shall establish a system for evaluating and qualifying subcontractors of products and services. A list of qualified sources and records of the evaluation shall be maintained and available for review.

Purchasing documents shall contain data clearly describing the product or service required and any special quality or contract requirements necessary for the subcontractor to satisfactorily complete the purchase order.

The supplier should maintain a system for verifying that the subcontractor has provided the product or service in compliance with the purchase order requirements.

**8.1.8 Verification of Purchased Product (QAM 7.4.3)**

The supplier shall maintain documented procedures for inspection and testing activities in order to verify that the product meets the specified requirements. The procedures shall describe the methods for identifying the inspection and test status of product.

Inspection and test equipment shall be selected based on the type of measurements and the accuracy and precision necessary to demonstrate product conformance. Equipment used for acceptance of product shall be controlled, calibrated and properly maintained.

Records of all inspection and testing activities shall be maintained and available for review. The records should clearly demonstrate the product or service conforms to all purchase order requirements and should identify the individual responsible for product acceptance.

**8.1.9 Product and Service Provision (QAM 7.5)**

The supplier shall ensure that production and special processes are performed under controlled conditions. At a minimum, procedures should be implemented to assure:

1. Compliance with referenced standards, codes and specifications,
2. Monitoring of process parameters and product characteristics,
3. Criteria for workmanship,
4. Suitable maintenance of equipment.

Personnel who perform welding, brazing, nondestructive testing and soldering shall be qualified in accordance with the appropriate industrial standards.

Records shall be maintained for qualified processes, equipment and personnel, as appropriate.

**8.1.10 Control of Monitoring and Measuring Devices (QAM 7.6)**

The supplier shall maintain a documented system for the control, calibration and maintenance of all inspection, measuring and test equipment used to demonstrate the conformance of product to specified requirements. The calibration system shall include the following:

1. Detailed procedures for the calibration of inspection, measuring and test equipment.

2. Control of the environmental conditions where equipment calibrations are accomplished.
3. Use of appropriate standards during calibration.
4. Provisions for the handling, preservation and storage of inspection, measuring and test equipment.
5. Records of calibration history including evaluations of equipment found to be out of calibration and the potential impact on previous inspections and test results.

#### **8.1.11 Control of Nonconforming Product (QAM 8.3)**

The supplier shall implement procedures to identify, segregate (where practical) and document product which does not conform to specified requirements. Suppliers shall process a Supplier Deviation Request (SDR) for all nonconforming conditions detected during the manufacture of TWMC product. SDRs shall be processed in accordance with this QAM Appendix.

Suppliers shall process nonconforming product in accordance with the disposition instructions stated on the SDR. Suppliers shall not ship nonconforming product prior to the disposition of the SDR.

#### **8.1.12 Corrective and Preventive Action**

The supplier shall implement a documented procedure for eliminating causes of nonconformities in order to prevent recurrence, as well as causes of potential nonconformities in order to prevent their occurrence.

#### **8.1.13 Internal Audits**

The supplier shall conduct internal audits at planned intervals. A documented procedure shall be established to define responsibilities and requirements for planning and conducting audits, establishing records and reporting the results. Records of the audit shall be maintained.

### **8.2 SQR200 - Nuclear Products and Services**

The requirements defined herein were taken directly from 10CFR50, Appendix 'B' (Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants), ASME NQA-1, Quality Assurance Requirements for Nuclear Facility Application, and 10CFR21 (Reporting of Defects and Noncompliance).

This appendix establishes quality assurance requirements for the design, construction, and operation of those structures, systems, and components. The pertinent requirements of this appendix apply to all activities affecting the safety-related functions of those structures, systems, and components; these activities include designing, purchasing, fabricating, handling, shipping, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, repairing, refueling, and modifying.

As used in this appendix, "quality assurance" comprises all those planned and systematic actions necessary to provide adequate confidence that a structure, system, or component will perform satisfactorily in service. Quality assurance includes quality control, which comprises those quality assurance actions related to the physical characteristics of a material, structure, component, or system which provide a means to control the quality of the material, structure, component, or system to predetermined requirements.



**8.2.1 Quality Management System, General Requirements (QAM 4.1)**

The supplier shall establish a quality assurance program which complies with the requirements of this appendix. This program shall be documented by written policies, procedures, or instructions. The quality assurance program shall provide control over activities affecting the quality products and services.

Activities affecting quality shall be accomplished under suitably controlled conditions. Controlled conditions include the use of appropriate equipment; suitable environmental conditions for accomplishing the activity, such as adequate cleanliness; and assurance that all prerequisites for the given activity have been satisfied. The program shall take into account the need for special controls, processes, test equipment, tools, and skills to attain the required quality, and the need for verification of quality by inspection and test.

The program shall provide for indoctrination and training of personnel performing activities affecting quality as necessary to assure that suitable proficiency is achieved and maintained. The supplier shall regularly review the status and adequacy of the quality assurance program.

**8.2.2 Documentation Requirements (QAM 4.2)**

Measures shall be established to control the issuance of documents, such as instructions, procedures, and drawings, including changes thereto, which prescribe all activities affecting quality. These measures shall assure that documents, including changes, are reviewed for adequacy and approved for release by authorized personnel and are distributed to and used at the location where the prescribed activity is performed. Measures should also be established to ensure obsolete documents are either removed from circulation or properly identified and controlled to prevent unintended use.

The document control system shall be documented and shall provide for:

- a. Identification of documents to be controlled and their specified distribution
- b. Identification of assignment of responsibility for preparing, reviewing, approving, and issuing documents
- c. Review of documents for adequacy, completeness, and correctness prior to approval and issuance.

Changes to documents shall be reviewed and approved by the same organizations that performed the original review and approval unless the applicant designates another responsible organization.

**8.2.3 Control of Records (QAM 4.2.4)**

Sufficient records shall be maintained to furnish evidence of activities affecting quality. The records shall be defined, implemented, and enforced in accordance with written procedures, instructions, or other documentation. The records shall include at least the following: Operating logs and the results of reviews, inspections, tests, audits, monitoring of work performance, and materials analyses.

The records shall also include closely-related data such as qualifications of personnel, procedures, and equipment. Inspection and test records shall, as a minimum, identify the inspector or data recorder, the type of observation, the results,

the acceptability, and the action taken in connection with any deficiencies noted. Records shall be identifiable and retrievable. Consistent with applicable regulatory requirements, the applicant shall establish requirements concerning record retention, such as duration, location, and assigned responsibility.

Quality records for Nuclear orders shall be maintained for a minimum of one year after shipment of the product unless otherwise stated in the Purchase Order.

### **Certifications**

Certificate of Compliance or Certification to test results, as required by purchase order, drawing or specification must accompany each shipment and include the following identifying data:

- Must be on company letterhead
- Supplier name
- Manufacturer's name and address (if different from above)
- TWMC purchase order number and line item(s)
- Drawing number and revision
- Quantity
- Manufacturers lot number (if applicable)
- Heat number(s) (if applicable)
- Specification number(s) and revision (if applicable)
- Supplier Deviation Request number (if applicable)
- Test results (as required)
- Statement of compliance or conformance to specified requirements

Certification(s) must contain the date, name and title of responsible, authorized agent of the supplier's company.

### **Submittal of Documents**

All quality records provided by the supplier shall be traceable to a TWMC purchase order. Forward records electronically to the TWMC Supply Chain Buyer and to QA at qa@tecwestinghouse.com, with the PO number and line number in the Subject line. When practical, a copy will also be sent with the item.

If electronic transmittal is not available, please mail to:

TECO-Westinghouse Motor Company  
5100 N. IH-35  
Round Rock, Texas 78681  
Attn: Quality Assurance - Records

### **8.2.4 Management Commitment (QAM 5.1)**

The supplier shall be responsible for the establishment and execution of the quality assurance program. The supplier may delegate to others, such as contractors, agents, or consultants, the work of establishing and executing the quality assurance program, or any part thereof, but shall retain responsibility therefor.

The authority and duties of persons and organizations performing quality assurance activities shall be clearly established and delineated in writing. These activities include both the performing functions of attaining quality objectives and the quality assurance functions. The quality assurance functions are those of

1. assuring that an appropriate quality assurance program is established and effectively executed and
2. verifying, such as by checking, auditing, and inspection, that activities affecting the safety-related functions have been correctly performed.

The persons and organizations performing quality assurance functions shall have sufficient authority and organizational freedom to identify quality problems; to initiate, recommend, or provide solutions; and to verify implementation of solutions. Such persons and organizations performing quality assurance functions shall report to a management level such that this required authority and organizational freedom, including sufficient independence from cost and schedule when opposed to safety considerations, are provided. Because of the many variables involved, such as the number of personnel, the type of activity being performed, and the location or locations where activities are performed, the organizational structure for executing the quality assurance program may take various forms provided that the persons and organizations assigned the quality assurance functions have this required authority and organizational freedom. Irrespective of the organizational structure, the individual(s) assigned the responsibility for assuring effective execution of any portion of the quality assurance program at any location where activities subject to this appendix are being performed shall have direct access to such levels of management as may be necessary to perform this function.

#### **8.2.5 Customer Focus (QAM 5.2)**

The supplier shall conduct a complete review of the contract (purchase order) requirements prior to submission of a quote or acceptance of an order to assure they have the capability to satisfy the requirements.

Records of contract review shall be maintained.

#### **8.2.6 Design and Development (QAM 7.3) (if applicable)**

Measures shall be established to assure that applicable regulatory requirements and the design basis, as defined in 10CFR50 Section 50.2 and as specified in the license application, for those structures, systems, and components to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions. These measures shall include provisions to assure that appropriate quality standards are specified and included in design documents and that deviations from such standards are controlled. Measures shall also be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the structures, systems and components.

Measures shall be established for the identification and control of design interfaces and for coordination among participating design organizations. These measures shall include the establishment of procedures among participating design organizations for the review, approval, release, distribution, and revision of documents involving design interfaces.

The design control measures shall provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculation methods, or by the performance of a suitable testing program. The verifying or checking process shall be performed by individuals or groups other than those who performed the original design, but who may be from the same organization. Where a test program is used to verify the adequacy of a specific design feature in lieu of other verifying or checking processes, it shall include suitable qualifications testing of a prototype unit under the most adverse design conditions. Design control measures shall be applied to items such as the following: reactor physics, stress, thermal, hydraulic, and accident analyses; compatibility of materials; accessibility for in service inspection, maintenance, and repair; and delineation of acceptance criteria for inspections and tests.

Design changes, including field changes, shall be subject to design control measures commensurate with those applied to the original design and be approved by the organization that performed the original design unless the applicant designates another responsible organization.

**8.2.7 Supply Chain (QAM 7.4)**

Measures shall be established to assure that applicable regulatory requirements, design bases, and other requirements which are necessary to assure adequate quality are suitably included or referenced in the documents for procurement of material, equipment, and services, whether purchased by the supplier or by its contractors or subcontractors. To the extent necessary, procurement documents shall require suppliers and subcontractors to provide a quality assurance program consistent with the pertinent provisions of this appendix.

**8.2.8 Verification of Purchased Product (QAM 7.4.3)**

Measures shall be established to assure that purchased material, equipment, and services, whether purchased directly or through subcontractors, conform to the procurement documents. These measures shall include provisions, as appropriate, for source evaluation and selection, objective evidence of quality furnished by the supplier or subcontractor, inspection at the supplier or subcontractor source, and examination of products upon delivery. The effectiveness of the control of quality by subcontractors shall be assessed by the supplier at intervals consistent with the importance, complexity, and quantity of the product or services.

**8.2.9 Product and Service Provision (QAM 7.5)**

Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

**8.2.10 Control of Production and Service Provision (QAM 7.5.1)**

**Special Processes**

Measures shall be established to assure that special processes, including welding, heat treating, and nondestructive testing, are controlled and accomplished by

qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements.

### **Inspection**

A program for inspection of activities affecting quality shall be established and executed by or for the organization performing the activity to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity. Such inspection shall be performed by individuals other than those who performed the activity being inspected. Examinations, measurements, or tests of material or products processed shall be performed for each work operation where necessary to assure quality. If inspection of processed material or products is impossible or disadvantageous, indirect control by monitoring processing methods, equipment, and personnel shall be provided. Both inspection and process monitoring shall be provided when control is inadequate without both. If mandatory inspection hold points, which require witnessing or inspecting by the applicant's designated representative and beyond which work shall not proceed without the consent of its designated representative are required, the specific hold points shall be indicated in appropriate documents.

#### **8.2.11 Validation of Processes for Production and Service Provision (QAM 7.5.2)**

A test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents.

Test procedures shall include provisions for assuring that all prerequisites for the given test have been met, that adequate test instrumentation is available and used, and that the test is performed under suitable environmental conditions. Test results shall be documented and evaluated to assure that test requirements have been satisfied.

#### **8.2.12 Identification and Traceability (QAM 7.5.3)**

Measures shall be established for the identification and control of materials, parts, and components, including partially fabricated assemblies. These measures shall assure that identification of the item is maintained by heat number, part number, serial number, or other appropriate means, either on the item or on records traceable to the item, as required throughout fabrication, erection, installation, and use of the item. These identification and control measures shall be designed to prevent the use of incorrect or defective material, parts, and components.

#### **8.2.13 Preservation of Product (QAM 7.5.5)**

Measures shall be established to control the handling, storage, shipping, cleaning and preservation of material and equipment in accordance with work and inspection instructions to prevent damage or deterioration. When necessary for particular products, special protective environments, such as inert gas atmosphere, specific moisture content levels, and temperature levels, shall be specified and provided.

**8.2.14 Control of Monitoring and Measuring Devices (QAM 7.6)**

Measures shall be established to assure that tools, gages, instruments, and other measuring and testing devices used in activities affecting quality are properly controlled, calibrated, and adjusted at specified periods to maintain accuracy within necessary limits.

**8.2.15 Monitoring and Measurement (QAM 8.2)**

Measures shall be established to indicate, by the use of markings such as stamps, tags, labels, routing cards, or other suitable means, the status of inspections and tests performed upon individual items. These measures shall provide for the identification of items which have satisfactorily passed required inspections and tests, where necessary to preclude inadvertent bypassing of such inspections and tests.

**8.2.16 Internal Audit (QAM 8.2.2)**

A comprehensive system of planned and periodic audits shall be carried out to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program. The audits shall be performed in accordance with the written procedures or checklists by appropriately trained personnel not having direct responsibilities in the areas being audited. Audit results shall be documented and reviewed by management having responsibility in the area audited. Follow up action, including re-audit of deficient areas, shall be taken where indicated.

**8.2.17 Control of Nonconforming Product (QAM 8.3)**

Measures shall be established to control materials, parts, or components which do not conform to requirements in order to prevent their inadvertent use or installation. These measures shall include, as appropriate, procedures for identification, documentation, segregation, disposition, and notification to affected organizations within 24 hours. Nonconforming items shall be reviewed and accepted, rejected, repaired or reworked in accordance with documented procedures.

The regulations in this part establish procedures and requirements for implementation of section 206 of the Energy Reorganization Act of 1974. That section requires any individual director or responsible officer of a firm constructing, owning, operating or supplying the components of any facility or activity which is licensed or otherwise regulated pursuant to the Atomic Energy Act of 1954, as amended, or the Energy Reorganization Act of 1974, who obtains information reasonably indicating: (a) That the facility, activity or basic component supplied to such facility or activity fails to comply with the Atomic Energy Act of 1954, as amended, or any applicable rule, regulation, order, or license of the Commission relating to substantial safety hazards or (b) that the facility, activity, or basic component supplied to such facility or activity contains defects, which could create a substantial safety hazard, to immediately notify the Commission of such failure to comply or such defect, unless he has actual knowledge that the Commission has been adequately informed of such defect or failure to comply.

- a) Any individual director, or responsible officer of a firm constructing, owning, operating, or supplying the components of any facility or activity which is licensed or otherwise regulated pursuant to the Atomic Energy Act of 1954 as amended,

or pursuant to this Act, who obtains information reasonably indicating that such facility or activity or basic components supplied to such facility or activity—

- 1) fails to comply with the Atomic Energy Act of 1954, as amended, or any applicable rule, regulation, order, or license of the Commission relating to substantial safety hazards, or
  - 2) contains a defect which could create a substantial safety hazard, as defined by regulations which the Commission shall promulgate, shall immediately notify the Commission of such failure to comply, or of such defect, unless such person has actual knowledge that the Commission has been adequately informed of such defect or failure to comply.
- b) Any person who knowingly and consciously fails to provide the notice required by subsection (a) of this section shall be subject to a civil penalty in an amount equal to the amount provided by section 234 of the Atomic energy Act of 1954, as amended.
  - c) The requirements of this section shall be prominently posted on the premises of any facility licensed or otherwise regulated pursuant to the Atomic Energy Act of 1954, as amended.
  - d) The Commission is authorized to conduct such reasonable inspections and other enforcement activities as needed to insure compliance with the provisions of this section.

#### **8.2.18 Corrective Action (QAM 8.5.2)**

Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition. The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken shall be documented and reported to appropriate levels of management.

### **8.3 SQR300 - Government Products and Services**

#### **8.3.1 Quality Management System, General Requirements (QAM 4.1)**

The supplier shall prepare a quality manual and procedures covering the requirements of SQR300. The manual shall outline the structure of documents used to implement the Quality Program. The range and detail of procedures that form the quality program should be based on the skills and training of personnel, the methods used and complexity of the work or product.

#### **8.3.2 Control of Documents (QAM 4.2.3)**

Measures shall be established to control the issuance of documents, such as instructions, procedures, and drawings, including changes thereto, which prescribe all activities affecting quality. These measures shall assure that documents, including changes, are reviewed for adequacy and approved for release by authorized personnel and are distributed to and used at the location where the prescribed activity is performed. Measures should also be established to ensure

obsolete documents are either removed from circulation or properly identified and controlled to prevent unintended use.

Changes to documents shall be reviewed and approved by the same organizations that performed the original review and approval unless the applicant designates another responsible organization.

### **8.3.3 Control of Records (QAM 4.2.4)**

#### **General**

The supplier shall maintain adequate quality records including, but not limited to:

- inspection and test records,
- calibration records,
- nonconformance reports,
- material certifications,
- process qualifications and certifications,
- personnel qualification records,
- design reviews, if applicable.

Quality records shall be made available for review at any time during the manufacturing cycle and shall be maintained on file for a minimum of six months after shipment of the product.

#### **Certifications**

Certificate of Compliance or Certification to test results, as required by purchase order, drawing or specification must accompany each shipment and include the following identifying data:

- Must be on company letterhead
- Supplier name
- Manufacturer's name and address (if different from above)
- TWMC purchase order number and line item(s)
- Drawing number and revision
- Quantity
- Manufacturers lot number (if applicable)
- Heat number(s) (if applicable)
- Specification number(s) and revision (if applicable)
- Supplier Deviation Request number (if applicable)
- Test results (as required)
- Statement of compliance or conformance to specified requirements
- Mercury Free statement (if required)



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- Fraudulent statement: "Recording of false, fictitious or fraudulent statements or entries may be punished as a felony under federal statutes."
- Reference to Defense Priorities and Allocation System (DPAS) Rating, i.e. DX-A3 or DO-A3 (if required)

Note: Blanket type statements are not acceptable. Examples of unacceptable statements are:

- a. The material meets all applicable specifications, drawings or contract requirements. This statement with reference traceable back to contract requirements is not acceptable.
- b. The material is a formula number or trade name which meets the specification number xxxxxxxxx.
- c. The material (formula or trade name) is on the qualified product list (QPL).
- d. Any statement of belief rather than fact, such as "to the best of my knowledge and belief . . ."
- e. The material was previously accepted by the Government.
- f. Statements signed by unidentified person(s).

Certification(s) must contain the date and signature block with name and position typed below signature.

#### **Submittal of Documents**

All quality records provided by the supplier shall be traceable to a TWMC purchase order. Forward records electronically to the TWMC Supply Chain Buyer and to QA at qa@tecowestinghouse.com, with the PO number and line number in the Subject line. When practical, a copy will also be sent with the item.

If electronic transmittal is not available, please mail to:

TECO-Westinghouse Motor Company  
5100 N. IH-35  
Round Rock, Texas 78681  
Attn: Quality Assurance - Records

#### **8.3.4 Management Commitment (QAM 5.1)**

The organizational structure should be clearly stated with lines of authority and communication defined.

#### **8.3.5 Customer Focus (QAM 5.2)**

The supplier shall conduct a complete review of the contract (purchase order) requirements prior to submission of a quote or acceptance of an order to assure they have the capability to satisfy the requirements.

Records of contract review shall be maintained.

#### **8.3.6 Design and Development (QAM 7.3) (if applicable)**

The supplier shall maintain documented procedures to control and verify the design of product in order to ensure that the specified requirements have been met. The design control system should address the following activities:

- Design and Development Planning,
- Organizational and Technical Interfaces,
- Design Inputs,
- Design Outputs,
- Design Reviews,
- Design Verification,
- Design Validations, and
- Design Changes.

**8.3.7 Purchasing Process (QAM 7.4.1)**

The supplier shall establish a system for evaluating and qualifying subcontractors of products and services. A list of qualified sources and records of the evaluation shall be maintained and available for review.

**8.3.8 Purchasing Information (QAM 7.4.2)**

Purchasing documents shall contain data clearly describing the product or service required and any special quality or contract requirements necessary for the subcontractor to satisfactorily complete the purchase order.

**8.3.9 Verification of Purchased Product (QAM 7.4.3)**

The supplier should maintain a system for verifying that the subcontractor has provided the product or service in compliance with the purchase order requirements.

**8.3.10 Control of Product and Service Provision (QAM 7.5.1)**

The supplier shall ensure that production and special processes are performed under controlled conditions. At a minimum, procedures should be implemented to assure:

1. Compliance with referenced standards, codes and specifications,
2. Monitoring of process parameters and product characteristics,
3. Criteria for workmanship,
4. Suitable maintenance of equipment.

Personnel who perform welding, brazing, nondestructive testing and soldering shall be qualified in accordance with the appropriate industrial standards.

Records shall be maintained for qualified processes, equipment and personnel, as appropriate.

**8.3.11 Validation of Processes for Production and Service Provision (QAM 7.5.2)**

The supplier shall maintain documented procedures for inspection and testing activities in order to verify that the product meets the specified requirements. The procedures shall describe the methods for identifying the inspection and test status of product.

Inspection and test equipment shall be selected based on the type of measurements and the accuracy and precision necessary to demonstrate product conformance.

Equipment used for acceptance of product shall be controlled, calibrated and properly maintained.

Records of all inspection and testing activities shall be maintained and available for review. The records should clearly demonstrate the product or service conforms to all purchase order requirements and should identify the individual responsible for product acceptance.

**8.3.12 Identification and Traceability (QAM 7.5.3)**

Measures shall be established for the identification and control of materials, parts, and components, including partially fabricated assemblies. These measures shall assure that identification of the item is maintained by heat number, part number, serial number, or other appropriate means, either on the item or on records traceable to the item, as required throughout fabrication, erection, installation, and use of the item. These identification and control measures shall be designed to prevent the use of incorrect or defective material, parts, and components.

**8.3.13 Preservation of Product (QAM 7.5.5)**

Measures shall be established to control the handling, storage, shipping, cleaning and preservation of material and equipment, in accordance with contract or purchase order requirements, to prevent damage or deterioration.

**8.3.14 Control of Monitoring and Measuring Devices (QAM 7.6)**

The supplier shall maintain a documented system for the control, calibration and maintenance of all inspection, measuring and test equipment used to demonstrate the conformance of product to specified requirements. The calibration system shall include the following:

1. Detailed procedures for the calibration of inspection, measuring and test equipment.
2. Control of the environmental conditions where equipment calibrations are accomplished.
3. Use of appropriate standards during calibration.
4. Provisions for the handling, preservation and storage of inspection, measuring and test equipment.
5. Records of calibration history including evaluations of equipment found to be out of calibration and the potential impact on previous inspections and test results.

**8.3.15 Internal Audit (QAM 8.2.2)**

A comprehensive system of planned and periodic audits shall be carried out to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program.

The audits shall be performed in accordance with the written procedures or checklists by appropriately trained personnel not having direct responsibilities in the areas being audited.

Audit results shall be documented and reviewed by management having responsibility in the area audited. Follow up action, including re-audit of deficient areas, shall be taken where indicated.

**8.3.16 Control of Nonconforming Product (QAM 8.3)**

The supplier shall implement procedures to identify, segregate (where practical) and document product which does not conform to specified requirements. Suppliers shall process a Supplier Deviation Request (SDR) for all nonconforming conditions detected during the manufacture of TWMC product. SDRs shall be processed in accordance with this QAM Appendix.

Suppliers shall process nonconforming product in accordance with the disposition instructions stated on the SDR. Suppliers shall not ship nonconforming product to TWMC prior to the disposition of the SDR.

**8.3.17 Corrective Action (QAM 8.5.2)**

The supplier shall implement a system for identifying and correcting causes of nonconforming product or quality system deficiencies. The procedures for corrective action should include:

1. the effective handling of customer complaints and reports of nonconformity,
2. investigation of the cause of nonconforming product or processes and quality system deficiencies,
3. determination of the corrective action needed to eliminate the cause of nonconforming conditions,
4. application of controls to ensure that corrective action is taken and that it is effective.

**8.4 SQR400 - Testing Laboratories**

Test laboratories that have received third-party accreditation to ISO/IEC 17025 general criteria for competence of testing and calibration laboratories shall receive approval upon review and approval of requested documentation and certification.

**8.4.1 Control of Documents (QAM 4.2.3)**

The supplier shall maintain a system for control of data and documents which provides the following:

1. the correct revision level of the documents are available and used,
2. obsolete documents are either removed from circulation or properly identified and controlled to prevent unintended use.

**8.4.2 Control of Records (QAM 4.2.4)**

**General**

The supplier shall maintain adequate quality records including, but not limited to:

- inspection and test records,
- calibration records,
- nonconformance reports,

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- material certifications,
- process qualifications and certifications,
- personnel qualification records,
- design reviews, if applicable.

Quality records shall be made available for review at any time during the procurement cycle and shall be maintained on file for a minimum of six months after shipment of the product.

#### **Certifications**

Certificate of Compliance or Certification to test results, as required by purchase order, drawing or specification must accompany each shipment and include the following identifying data:

- Must be on company letterhead
- Supplier name
- TWMC purchase order number and line item(s)
- Drawing number and revision
- Quantity
- Manufacturers lot number (if applicable)
- Heat number(s) (if applicable)
- Specification number and revision
- Test results
- Statement of compliance or conformance to specified requirements

Certification(s) must contain the date, name and title of responsible, authorized agent of the supplier's company.

#### **Submittal of Documents**

All quality records provided by the supplier shall be traceable to a TWMC purchase order. Forward records electronically to the TWMC Supply Chain Buyer and to QA at qa@tecowestinghouse.com, with the PO number and line number in the Subject line. When practical, a copy will also be sent with the item.

If electronic transmittal is not available, please mail to:

TECO-Westinghouse Motor Company  
5100 N. IH-35  
Round Rock, Texas 78681  
Attn: Quality Assurance - Records

#### **8.4.3 Customer Focus (QAM 5.2)**

The supplier shall conduct a complete review of the contract (purchase order) requirements prior to submission of a quote or acceptance of an order to assure they have the capability to satisfy the requirements.

**8.4.4 Control of Production and Service Provision (QAM 7.5.1)**

The supplier shall ensure that production and special processes are performed under controlled conditions. At a minimum, procedures should be implemented to assure:

1. compliance with referenced standards, codes and specifications,
2. monitoring of process parameters and product characteristics,
3. criteria for workmanship,
4. suitable maintenance of equipment.

Personnel who perform welding, brazing, nondestructive testing and soldering shall be qualified in accordance with the appropriate industrial or company standards.

Records shall be maintained for qualified processes, equipment and personnel, as appropriate.

**8.4.5 Validation of Processes for Production and Service Provision (QAM 7.5.2)**

The supplier shall maintain documented procedures for inspection and testing activities in order to verify that the product meets the specified requirements. The procedures shall describe the methods for identifying the inspection and test status of product.

Inspection and test equipment shall be selected based on the type of measurements and the accuracy and precision necessary to demonstrate product conformance. Equipment used for acceptance of product shall be controlled, calibrated and properly maintained.

Records of all inspection and testing activities shall be maintained and available for review. The records should clearly demonstrate the product or service conforms to all purchase order requirements and should identify the individual responsible for product acceptance.

**8.4.6 Control of Monitoring and Measuring Devices (QAM 7.6)**

The supplier shall maintain a documented system for the control, calibration and maintenance of all inspection, measuring and test equipment used to demonstrate the conformance of product to specified requirements. The calibration system shall include the following.

1. Detailed procedures for the calibration of inspection, measuring and test equipment.

Note: If the service is done at TWMC, the Service Technician shall have written procedures or instructions in his/her possession.

2. Control of the environmental conditions where equipment calibrations are accomplished.
3. Use of appropriate standards during calibration.
4. Provisions for the handling, preservation and storage of inspection, measuring and test equipment.
5. Records of calibration history including evaluations of equipment found to be out of calibration and the potential impact on previous inspections and test results.

## **8.5 SQR500 - Measuring and Test Equipment Calibration and Repair Services**

Calibration services that have received third-party accreditation to ISO/IEC 17025, General Requirements for the Competence of Testing and Calibration Laboratories and/or ANSI/NCSL Z540, Calibration Laboratories and Measuring and Test Equipment - General Requirements shall receive approval upon review and approval of requested documentation and certification.

### **8.5.1 Quality Management System - General Requirements (QAM 4.1)**

The supplier shall implement a program to verify that items supplied conform to TWMC's purchase order requirement. The supplier shall maintain appropriate instructions for meeting requirements of this procedure for all items and services supplied.

### **8.5.2 Control of Documents (QAM 4.2.3)**

The supplier shall maintain a system for control of data and documents which provides the following:

1. the correct revision level of the documents are available and used,
2. obsolete documents are either removed from circulation or properly identified and controlled to prevent unintended use.

### **8.5.3 Control of Records (QAM 4.2.4)**

The supplier shall maintain adequate records, including, but not limited to:

- inspection and test records
- calibration records
- nonconformance reports
- process qualifications and certifications (if required)
- personnel qualification records

Certificate of Conformance/Calibration with identification and traceability of test equipment and standards traceable to national or international standards used for calibration must accompany each shipment and include, or have as an attachment, the following identifying data:

- supplier name
- TWMC purchase order number and line item numbers (if required)
- identification of the instrument by make, model, and serial number
- calibration accuracy to manufacturer's specifications unless otherwise approved by TWMC
- pre-calibration results before adjustment or repair. **If out of specification, note ranges and error value and report this condition to TWMC within 24 hours;** general statements such as "Failed Receipt Test," "Operational Failure" or "Out of Specification" are not acceptable. Note: This section is not applicable to new instruments.
- identification of procedure, manual, or instruction used for calibration.

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- date, interval and results of the calibration or test
- identification of any measurement limitations, if any, referenced to the published specifications of the calibration procedure used
- calibration certificate must be signed



**Submittal of Documents**

All quality records provided by the supplier shall be traceable to a TWMC purchase order. Forward records electronically to the TWMC Supply Chain Buyer and to QA at qa@tecowestinghouse.com, with the PO number and line number in the Subject line. When practical, a copy will also be sent with the item.

If electronic transmittal is not available, please mail to:

TECO-Westinghouse Motor Company  
5100 N. IH-35  
Round Rock, Texas 78681  
Attn: Quality Assurance - Records

**8.5.4 Customer Focus (QAM 5.2)**

The supplier shall conduct a complete review of the contract (purchase order) requirements prior to submission of a quote or acceptance of an order to assure they have the capability to satisfy the requirements.

Inspection shall be performed to verify conformance with applicable instructions, procedures, drawings and other purchase order requirements.

**8.5.5 Control of Monitoring and Measuring Devices (QAM 7.6)**

The supplier shall maintain a documented system for the control, calibration and maintenance of all inspection, measuring and test equipment used to demonstrate the conformance of product to specified requirements. The calibration system shall include the following:

1. Detailed procedures for the calibration of inspection, measuring and test equipment.

Note: If the service is done at TWMC, the Service Technician shall have written procedures or instructions in his/her possession.

2. Control of the environmental conditions where equipment calibrations are accomplished.
3. Use of appropriate standards during calibration that are traceable to NIST.  
Note: Alternate bases for calibration shall be documented and approved by TWMC.
4. Provisions for the handling, preservation and storage of inspection, measuring and test equipment.
5. Records of calibration history including evaluations of equipment found to be out of calibration and the potential impact on previous inspections and test results.

**8.6 SQR600 - Distributor and Catalog Suppliers**

**8.6.1 Control of Documents (QAM 4.2.3)**

The supplier shall maintain a system for control of data and documents which provides the following:

1. the correct revision level of the documents are available and used,

2. obsolete documents are either removed from circulation or properly identified and controlled to prevent unintended use.

**8.6.2 Customer Focus (QAM 5.2)**

The supplier shall conduct a complete review of the contract (purchase order) requirements prior to submission of a quote or acceptance of an order to assure they have the capability to satisfy the requirements.

**8.6.3 Purchasing Process (QAM 7.4.1)**

The supplier shall establish a system for evaluating and qualifying subcontractors of products and services. A list of qualified sources and records of the evaluation shall be maintained and available for review.

**8.6.4 Purchasing Information (QAM 7.4.2)**

Purchasing documents shall contain data clearly describing the product or service required and any special quality or contract requirements necessary for the subcontractor to satisfactorily complete the purchase order.

**8.6.5 Verification of Purchased Product (QAM 7.4.3)**

The supplier should maintain a system for verifying that the subcontractor has provided the product or service in compliance with the purchase order requirements.

**8.6.6 Preservation of Product (QAM 7.5.5)**

Measures shall be established to control the handling, storage, shipping, cleaning and preservation of material and equipment in accordance with work and inspection instructions to prevent damage or deterioration.

**8.7 SQR700 - Transportation Services**

**8.7.1 Customer Focus (QAM 5.2)**

The supplier shall conduct a complete review of the contract (purchase order) requirements prior to submission of a quote or acceptance of an order to assure they have the capability to satisfy the requirements.

**8.7.2 Preservation of Product (QAM 7.5.5)**

Measures shall be established to control the handling, storage, shipping, cleaning and preservation of material and equipment in accordance with work and inspection instructions to prevent damage or deterioration.

**8.8 SQR800 - Training and Consulting/Services**

**Customer Focus (QAM 5.2)**

The supplier shall conduct a complete review of the contract (purchase order) requirements prior to submission of a quote or acceptance of an order to assure they have the capability to satisfy the requirements.

Note: If the service provided augments TWMC's 10CFR50 Appendix B Program and affects product, the individuals should be trained on 10CFR21.

**8.9 SQR900 - Motor Service and Repair Activities**

**8.9.1 Control of Documents (QAM 4.2.3)**

The supplier shall maintain a system for control of data and documents which provides the following:

1. the correct revision level of the documents are available and used,
2. obsolete documents are either removed from circulation or properly identified and controlled to prevent unintended use.

**8.9.2 Control of Records (QAM 4.2.4)**

The supplier shall maintain adequate quality records including, but not limited to:

- inspection and test records,
- calibration records,
- nonconformance reports, as applicable,
- material certifications, as applicable,
- process qualifications and certifications, as applicable,
- personnel qualification records, as applicable.

Quality records shall be made available for review at any time during the manufacturing cycle and shall be maintained on file for a minimum of six months after shipment of the product.

**8.9.3 Customer Focus (QAM 5.2)**

The supplier shall conduct a complete review of the contract (purchase order) requirements prior to submission of a quote or acceptance of an order to assure they have the capability to satisfy the requirements.

**8.9.4 Control of Production and Service Provision (QAM 7.5.1)**

The supplier shall ensure that production and special processes are performed under controlled conditions. At a minimum, procedures should be implemented to assure:

1. compliance with referenced standards, codes and specifications,
2. monitoring of process parameters and product characteristics,
3. criteria for workmanship,
4. suitable maintenance of equipment.

Personnel who perform welding, brazing, nondestructive testing and soldering shall be qualified in accordance with the appropriate industrial standards.

Records shall be maintained for qualified processes, equipment and personnel, as appropriate.

**8.9.5 Validation of Processes for Production and Service Provision (QAM 7.5.2)**

The supplier shall maintain documented procedures for inspection and testing activities in order to verify that the product meets the specified requirements. The

procedures shall describe the methods for identifying the inspection and test status of product.

Inspection and test equipment shall be selected based on the type of measurements and the accuracy and precision necessary to demonstrate product conformance. Equipment used for acceptance of product shall be controlled, calibrated and properly maintained.

Records of all inspection and testing activities shall be maintained and available for review. The records should clearly demonstrate the product or service conforms to all purchase order requirements and should identify the individual responsible for product acceptance.

**8.9.6 Preservation of Product (QAM 7.5.5)**

Measures shall be established to control the handling, storage, shipping, cleaning and preservation of material and equipment in accordance with work and inspection instructions to prevent damage or deterioration.

**8.9.7 Control of Monitoring and Measuring Devices (QAM 7.6)**

The supplier shall maintain a documented system for the control, calibration and maintenance of all inspection, measuring and test equipment used to demonstrate the conformance of product to specified requirements. The calibration system shall include the following:

1. Detailed procedures for the calibration of inspection, measuring and test equipment.
2. Control of the environmental conditions where equipment calibrations are accomplished.
3. Use of appropriate standards during calibration.
4. Provisions for the handling, preservation and storage of inspection, measuring and test equipment.
5. Records of calibration history including evaluations of equipment found to be out of calibration and the potential impact on previous inspections and test results.

**9.0 COUNTERFEIT OR FRAUDULENT ITEMS**

Inspection and testing processes shall identify and consider items with the following indications as suspect:

- Altered manufacturer's name, logo, serial number, manufacturing date
- Items differing in configuration, dimensions, fit, finish, color, or other attributes from that expected
- Markings on items or documentation are missing, unusual, altered, or inconsistent with that expected
- Markings or documentation from country other than that of sub-supplier
- Items, sold as new, exhibit evidence of prior use
- Performance inconsistent with specifications or certification or test data furnished
- Documentation that appears altered, incomplete or lacks expected traceability, Underwriters Laboratory (UL) (Reference 2.32) or manufacturer's markings.

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#### 10.0 REVISION HISTORY

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| Rev. 0, 7/18/02  | This document replaces former Appendix 6. Formatted document to comply with Quality System update to ISO 9001:2000.<br>Approved by: A. Sykes   |
| Rev. 1, 1/17/03  | Updated SQR500 to satisfy Flowserve RCA:195 / CA0909.<br>Approved by: A. Sykes   |
| Rev. 2, 6/21/04  | Added Note to SQR400 • 7.6 and SQR500 • 7.6. Added /Inspection and Note to SQR800.<br>Approved by: A. Sykes  |
| Rev. 3, 4/12/06  | Added Note to SQR300 • 4.2.4 to satisfy CA1060. Changed SQR800 from "Training and Consulting Services" to "Training and Consulting/Services."<br>Approved by: A. Sykes   |
| Rev. 4, 9/27/07  | Changed numbering sequence for clarity.<br>Approved by: A. Sykes   |
| Rev. 5, 3/6/08   | Added section 5.0 on Identification and Marking of Parts, Material & Components. Added "and affects product" to note in 8.8 to satisfy CA1094.<br>Approved by: A. Sykes  |
| Rev. 6, 5/27/09  | Updated to comply with ISO 9001:2008 and current practices.<br>Approved by: A. Sykes   |
| Rev. 7, 3/30/10  | Updated to satisfy CA1170. Also updated 8.5.3 to make calibration test equipment and standards traceable to national or international standards.<br>Approved by: A. Sykes  |
| Rev. 8, 9/29/10  | Updated to satisfy EBARA External Audit Report EAR-10-05 dated Aug 24 to 27, 2010: CAR-10-0070/CA1180, CAR-10-0071/CA1181.<br>Revised by: Donald Jones, Sr. Quality Engineer<br>Reviewed by: Stephen Hammonds, Quality Engineer<br>Approved by: Anthony Sykes, Quality Assurance Manager |
| Rev. 9, 12/28/11 | Updated to current SDR practices.<br>Revised by: Pamela Godfrey, Commodity Manager<br>Reviewed by: Frank Simek, Commodity Manager<br>Approved by: Anthony Sykes, Quality Assurance Manager   |
| Rev. 10, 3/27/13 | Updated to add section 9.0, Counterfeit and Fraudulent Items.<br>Approved by: Anthony Sykes, Quality Assurance Manager   |