

Supplier Quality Requirements Manual

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BUILDING A BETTER WORLD

Contents

1 PURPOSE	3
2 HOW WE SOURCE	3
3 NORMATIVE REFERENCES	3
4 TERMS AND DEFINITIONS	3
5 INTRODUCTION	3
6 ORDER OF PRECEDENCE IN SUPPLIER REQUIREMENTS	3
7 SUPPLIER-BW COMMUNICATIONS	3
8 PURCHASE ORDER REQUIREMENTS, INTERPRETATION AND CONTRACT REVIEW	4
9 SUPPLIER PERFORMANCE EXPECTATIONS AND MEASUREMENT	4
10 SUPPLIER CORRECTIVE ACTIONS	4
11 PRODUCT CONFORMANCE REQUIREMENTS	4
12 INSPECTION, STATISTICAL SAMPLING, AND CALIBRATION	5
13 COMPETENCY AND AWARENESS OF PERSONNEL	5
14 DOCUMENT CONTROL	5
15 CONTROL OF NONCONFORMING PRODUCTS AND RAW MATERIALS	6
16 SUPPLIER QUALITY SYSTEM REQUIREMENTS	6
17 BUSINESS CONTINUITY AND RISK MANAGEMENT	6
18 RECORD RETENTION AND INTEGRITY	6
19 LOT TRACEABILITY	7
20 RIGHT OF ENTRY	7
21 PROCESS CONTROL AND CHANGE NOTIFICATION	7
22 CONTROL OF SHELF LIFE-SENSITIVE PRODUCTS AND RAW MATERIALS	7
23 PREVENTIVE MAINTENANCE	7
24 FIRST ARTICLE INSPECTION	7
25 PACKAGING, PRESERVATION AND IDENTIFICATION	7
26 PLANNED OBSOLESCENCE	8
27 IMPORT/EXPORT REQUIREMENTS	8
SUPPLEMENTAL REQUIREMENTS	8

1 Purpose

This document establishes product quality assurance requirements for all Products, Raw Material, and Services procured by a BW Buyer, whether via Purchase Order or otherwise, to ensure that such Products, Raw Material, and Services conform to the required levels of quality and reliability. The Supplier, by accepting the order, agrees to deliver all Products, Material, and Services in conformity with these documented requirements in all respects.

2 How We Source

External Suppliers of all Products, Raw Materials, Services, or Secondary Processes, to a BW Buyer. This Supplier Quality Requirements Manual shall be referenced and incorporated in all applicable Purchase Order and similar procurement documents by BW Buyers.

3 Normative References

ISO 9001:2015 Quality Management Systems- Requirements

4 Terms and Definitions

- BW: Barry-Wehmiller Companies, Inc., a Missouri Corporation
- BW Buyer: Includes BW, and each of its affiliates and all direct and indirect subsidiaries duly authorized to purchase Products, Raw Material, and Services.
- Certificate of Conformance (CoC): A document furnished by a Supplier certifying that, to the best of the organization's knowledge, the Products, Raw Material, and Services provided comply with all relevant Purchase Order requirements.
- First Article: A Product manufactured for the first time by a Supplier.
- Product: Includes all products, equipment, parts, components, and similar items.
- Purchase Order: The contractual document specifying to the Supplier, at a minimum and where applicable, the part number(s), quantities(s), revision level(s) and special requirements of the Products, Raw Materials, or Services purchased/procured by a BW Buyer.
- Raw Materials: Includes all materials, goods, and related items used in fabrication of a Product.
- Secondary Processes: Value-added processing, usually defined as a 'special process', such as heat treat, or chemical processing.
- Services: Includes all services provided by Supplier for the Benefit of a BW Buyer.
- Shelf Life-Sensitive: A description of a Product having an expiration date or use-by date.
- Source Inspection: A required inspection is when a BW Buyer elects to perform the incoming inspection of the purchased Product or Raw Material at the Supplier's site.
- Supplier: Any supplier or materialman providing Products, Raw Materials, and Services to a BW Buyer.

5 Introduction

BW is committed to aggressive business growth and cannot do so without Suppliers that can be counted on to provide superior Products, Raw Materials, Services with consistent on-time delivery. Our goal is to set our Suppliers up for success and reward high performers accordingly. The intent of this manual is to communicate our supply needs consistently and in as much of an all-encompassing manner as possible. Any questions regarding the interpretation of this manual should be addressed to the applicable BW Buyer or Supplier quality representative. Moreover, the key to a successful supplier-customer relationship is communication, which is the recurring theme within this manual.

6 Order of Precedence in Supplier Requirements

The order of documents defining supplier requirements with regards to supplying Products, Raw Materials, or Services under a BW Buyer Purchase Order is as follows:

1. The Purchase Order
2. The relevant accompanying drawing(s) provided by the BW Buyer
3. Any documented supplier quality requirements specified by the BW Buyer
4. This Supplier Quality Requirements Manual

7 Supplier-BW Communications

The BW Buyer shown on the Purchase Order is the Supplier's primary point of contact regarding that Purchase Order and any related commercial details. A BW Supplier quality representative may communicate product rejections and requests for corrected quality documents to Suppliers. These may be communicated to allow the Supplier the opportunity to correct the deficiency and prevent further issues.

It is the responsibility of the supplier to communicate any requirements outlined in this manual to any of their affected sub-tier external providers where applicable.

8 Purchase Order Requirements, Interpretation and Contract Review

The Supplier is responsible for confirming they possess all relevant technical data, at the revision level(s) specified on the Purchase Order, before committing to fulfilling that Purchase Order. Upon accepting the Purchase Order, the Supplier is responsible for compliance to all contract (e.g., engineering drawing, specification, purchase order) requirements. All documents, drawings, and specifications, regardless of origin, are applicable to the Supplier when specified in the Purchase Order or related documentation and are required to be used at all levels of the supply chain. Unless otherwise specified by the site, the BW Buyer purchasing department is responsible for communicating all relevant technical data, and any subsequent revisions necessary to support the Purchase Order.

Supplemental requirements, as defined in an appendix of this manual, apply when their respective appendix number(s) is noted on the Purchase Order. Where the primary requirements and those in the appendix of this manual conflict, the requirements in the indicated appendix shall supersede.

Unless otherwise specified in the Purchase Order, the document revision in effect on the date of issue of the Purchase Order applies and governs the Supplier's obligations. Neither audit, surveillance, inspection, or tests made by the BW Buyer or representatives of the BW Buyer or its customer(s), at Supplier's facilities, at any sub-tier facilities, or upon receipt at the BW Buyer facility, relieves the Supplier of the responsibility to furnish acceptable Products, Raw Materials, and Services that conform to all Purchase Order requirements; nor does it preclude subsequent rejection by the BW Buyer or its customers.

The Supplier is expected to perform a contract review upon receipt of a Purchase Order and taking action to ensure compliance with all Purchase Order requirements.

9 Supplier Performance Expectations and Measurement

Quality

Suppliers are expected to deliver Products, Raw Materials, and Services that comply with all design and workmanship requirements defined within the relevant drawing(s) and specifications described from the Purchase Order. Furthermore, this includes work performed by the Supplier's sub-tier Suppliers (also known as sub-suppliers or subcontract suppliers). Where specified by a Purchase Order, the Supplier shall purchase Products, Raw Materials, and/or Services from BW Buyer designated sources. However, the Supplier is responsible for ensuring that items procured from such sources meet all applicable technical and quality requirements.

On-Time Delivery (OTD)

Suppliers are expected to deliver Products, Raw Materials, and Services by the on-dock date noted on the applicable Purchase Order. Any deliveries received after the on-dock date will be considered late. Deliveries may be made up to, but no earlier than, 7 days early.

- Supplier conformity to these Quality and OTD requirements are measured and reviewed on a site-specific basis. Contact your BW Buyer to review the Quality and OTD objectives as well as how they are calculated. Please provide a copy of this signed page to your BW Buyer representative as affirmation of your review of this manual.
- Supplier Corrective Actions Requests (SCARs) may be issued by your BW Buyer site Quality or Purchasing representative if the supplier has failed to meet one or both of these objectives. Suppliers are expected to complete the SCAR addressing the root causes of the low performance and submit the completed report by the noted due date.

10 Supplier Corrective Actions

SCARs may be issued to suppliers to address Supplier performance below monthly objectives (see Section 9.0), Supplier audit findings, or to address particular Supplier nonconformities. Unless otherwise directed, a Supplier is expected to submit the completed SCAR by the noted due date(s). A Supplier may use their own form if it includes the required inputs of the BW SCAR form provided. If a Supplier corrective action investigation needs more time than allotted to submit the plan, a Supplier may request an extension in writing.

11 Product Conformance Requirements

Quality (Design Requirements)

Suppliers are expected to deliver Products, Raw Materials and Services that comply with all design requirements defined within the part drawing(s) delineated from the Purchase Order.

Quality (Workmanship)

At a minimum, all Products, Raw Materials, and Services must comply with all workmanship and appearance requirements specified on the relevant BW Buyer drawings including relevant industry standards.

Certificates of Conformity (CoCs)

All Suppliers are expected to maintain a system for controlling and assuring the quality of the Products and Raw Materials they provide with the capacity to certify the same to a BW Buyer. When specified, Products and Raw Materials shipped pursuant to a Purchase Order are required to be accompanied by a CoC. The CoC must certify that, to the best of the Supplier's knowledge, the relevant Products or Raw Materials have been produced within the requirements of the Supplier's quality system and have been verified to meet all applicable design and workmanship standards (Note: see exception in Section 11.0(d) below). CoCs must be signed by authorized Supplier representative (see Section 18.0 for requirements governing electronic signatures). The CoC content must reference the relevant BW Buyer and Purchase Order number, part/specification numbers, part/specification revision levels, representative lot numbers, serial numbers (if components are serialized-yes), and quantities. Additionally, Suppliers of Raw Materials are required to provide the applicable mill certificate with each shipment.

Temporary Deviation Requests

Temporary deviation requests may be made in writing to the BW Buyer supplier quality representative using the means specified by the applicable BW Buyer. The Supplier may not ship product until the deviation request has been formally approved in writing by BW Buyer quality assurance or purchasing representative. When approved, the Supplier must include a copy of the approved deviation with the shipment and make reference to it on their CoC. Requests for design changes to BW Buyer designs must be formally submitted in writing, and approved by the appropriate BW Buyer authority, prior to implementation. The BW Buyer must be copied on all requests.

12 Inspection, Statistical Sampling, and Calibration

Inspection

The Supplier is responsible for planning and implementing inspection and testing at appropriate stages of their processes with controls to ensure positive release of product only after all inspection requirements have been satisfactorily met. Where process validation is periodically required, or inspection/test results are not immediately available, the Supplier shall have the ability recall a Product if inspection or test results are not acceptable.

Calibration

Inspection and testing activities shall be performed using suitable equipment calibrated to standards traceable to NIST. The Supplier shall maintain a calibration program (or outsource such activity) in accordance with ISO17025 or an equivalent standard.

Statistical Sampling

The ANSI/ASQC Z1.4 C=0 sampling plan may be used unless 100% inspection is required by the governing Purchase Order. AQLs and alternate sampling plans shall be approved by the BW Buyer prior to implementation.

Visual Inspection

Manufactured Products and those subjected to Secondary Processing shall be visually inspected for acceptable workmanship and appearance to verify compliance with the BW Buyer's drawing and applicable industry standards.

13 Competency and Awareness of Personnel

The Supplier shall ensure those personnel performing work affecting the quality of Products, Raw Materials, and Services supplied to a BW Buyer are competent and capable within the scope of their activities performed.

Additionally, the Supplier shall ensure that all personnel (including their subcontractors) are aware of their contribution to Product, Raw Material, and Service quality, safety, and ethical procurement standards.

14 Document Control

The Supplier shall implement and maintain a process for the control of external specifications. It is the Supplier's responsibility to monitor and review changes to industry standards affecting Purchase Orders. The Supplier shall conform to the latest released revisions of the applicable

industry standard. The Supplier shall promptly contact their BW Buyer if revision levels noted on the Purchase Order and the provided specifications conflict.

It is the Supplier's responsibility to confirm the BW Buyer specifications stated on the Purchase Order are available and current with their contract review process. The Supplier shall contact their BW Buyer immediately if revision levels noted on the Purchase Order and the provided specifications conflict.

15 Control of Nonconforming Products and Raw Materials

The Supplier shall implement a process for positively identifying, segregating, and disposing nonconforming Products and Raw Material to prevent shipment of the same. Rejected Products and Raw Materials may be disposed "Return to Vendor". Such rejections will be communicated to the Supplier with a request for RMA (Return Material Authorization) and a nonconformity report. Suppliers are expected to issue the RMA or otherwise address the request with the BW Buyer within 2 business days (*Note: Issuing an RMA does not constitute the Supplier's acceptance of responsibility for the perceived nonconforming Product or Raw Materials*).

In the event nonconforming Product or Raw Material is inadvertently released and shipped from your facility, the Supplier is required to immediately notify the BW Buyer or quality representative. This notification must be made with a written notice of escape. The Supplier is expected to lead and support any containment action necessary.

Repair of nonconformities is prohibited unless approved by an authorized BW Buyer representative. Reworked Product may be released to the BW Buyer after it is verified as conforming by an authorized supplier quality representative. Rework is defined as additional operations that are not part of the basic production process flow, which will bring product in full compliance with applicable drawings and specifications. Repair is defined as additional operations that are not part of the basic production process flow and will make the production functional but **not** bring product in full compliance with applicable drawings and specifications.

16 Supplier Quality System Requirements

Any requirement for 3rd-party certification to a quality management system standard is specified by the site from which the governing Purchase Order is issued. The Supplier is required to notify their supplier quality representative within 48 hours if there has been a change in their certification status including suspension, withdrawal, changes in scope, or changes in certification body.

Upon request, the Supplier shall furnish the BW Buyer with a copy of the Supplier's quality management system manual and relevant accompanying procedures and work instructions. The quality management system documentation shall include the Supplier's statement of a quality policy and quality objectives.

Senior management shall define quality objectives and measurements which should address customer expectations and be achievable within a defined period of time. The Supplier shall promptly notify the BW Buyer quality representative of any substantive changes to the supplier's quality management system or personnel.

17 Business Continuity and Risk Management

The Supplier shall plan and document a business continuity plan to mitigate risks to supply chain disruptions due, at a minimum, to utility disruptions, capital equipment breakdowns, natural disasters, labor shortages, labor disputes (if applicable), the loss of critical knowledge, and cyber-attacks. This plan shall be available to a BW Buyer upon request.

18 Record Retention and Integrity

The Supplier is required to maintain quality records related to all Products, Raw Materials and Services supplied pursuant to a Purchase Order for a minimum of 5 years or as specified by the BW Buyer site. If the Supplier wishes to no longer maintain those records at their facility, they may request in writing that they be transferred to the applicable BW Buyer for storage. Supplier quality records include, but are not limited to, certificates of conformity for finished goods, certificates of conformity for special processing, raw material certificates, any nonconformity reports with resulting actions (e.g.: rework), incoming inspection reports, in-process inspection reports, final inspection reports, and first article inspection reports.

Records shall be made and stored in a manner to protect them from alteration and deterioration to ensure continued integrity, authenticity and availability. The use of any method that causes the original data on documents to be obliterated and unreadable (e.g.: the use of correction fluids, correction tape, write-over, or other methods) to correct, modify or otherwise alter the data and/or entries on any certifications, test reports or other documents required by the contract, is strictly prohibited.

The issue of electronic documents and application of electronic signatures must be under the direct control of the individual whose name appears on the electronic document. Electronic signatures may only be applied at the place where the individual is located, and the individual must have direct access and responsibility for the products or services described in the electronic document. The application of the electronic signature certifies that the signature (individual) represents an authorized company official. A signatories name typed using a cursive font does not constitute an authentic signature.

19 Lot Traceability

In accordance with the record retention requirements of Section 18.0, the Supplier shall be capable of furnishing all quality records for a given lot of Products or Raw Materials shipped to a BW Buyer within 48 hours of the request. The Supplier shall establish a lot of traceability systems that track Products and related components throughout the value stream, from Raw Material through shipment to the BW Buyer. This includes all process steps including inspection and test procedures, rework, and sub-tier supplier operations.

20 Right of Entry

BW Buyers and their customers reserve the right-of-entry to Suppliers and all sub-tier supplier facilities subject to proprietary considerations.

21 Process Control and Change Notification

The Supplier shall notify its BW Buyer in writing of any changes in key management personnel, company name, or company ownership. Additionally, the Supplier shall notify its BW Buyer in writing of any intended:

- relocation of production, inspection, or processing facilities
- transferring work between different facilities, or
- initiating any changes in the source of major components procured by the Supplier and designated for use in or for installation on products scheduled for delivery to the BW Buyer.

The means of manufacturing Products and Raw Materials shall be defined, documented, and controlled to direct the processes and their sequence necessary to conform to product requirements (i.e.: routings, travelers, checklists, etc.).

The Supplier shall prepare documented work instructions for all employees having responsibilities for the operation of processes that impact Product and Raw Material quality. These instructions shall be maintained in a current form and be accessible at the point of use.

22 Control of Shelf Life-Sensitive Products and Raw Materials

The Supplier shall implement a process to ensure shelf-life sensitive Products and Raw Materials are controlled, properly stored, and only used within their expiration dates.

It is the responsibility of the Supplier to ensure such Products and Raw Materials have at least 75% of their shelf life remaining at the time of shipment when providing shelf-life sensitive materials to a BW Buyer. The expiration date of the Products and Raw Materials shall be clearly noted on their representative certificate of conformity or packing slip as well as on the Products' and/or Raw Materials' packaging.

23 Preventive Maintenance

The Supplier should identify key process equipment and provide resources for machine/equipment maintenance activities and develop an effective planned total preventive maintenance system.

24 First Article Inspection

Products supplied to a BW Buyer must be delivered with a first article inspection report (FAIR) when the Product is being manufactured and delivered to a BW Buyer for the first time. The methods of reporting will be specified by the applicable BW Buyer site.

25 Packaging, Preservation and Identification

Suppliers are responsible for packaging of all Products and Raw Materials for shipment in the manner necessary to ensure they arrive at the ship-to location with no damage or in any otherwise defective state. Products and Raw Materials shall be preserved to prevent corrosion during processing and shipment.

Products and Raw Materials are required to have the secondary packaging identified with the following information:

- Part Number and Revision Level

- Quantity
- Purchase Order Number, PO Revision Level, and Line Item Number
- Expiration Date (if applicable)
- Supplier Lot Number.
 - This may be a job order number, batch number, etc. This number must provide traceability to the raw material, finishing batch numbers, inspection records, and any other records necessary to demonstrate conformity to the Product's and/or Raw Materials' requirements.

26 Planned Obsolescence

The Supplier is responsible for notifying the appropriate BW Buyer, at a minimum, 6 months in advance of any planned obsolescence and is applicable to any Products or Raw Materials purchased by such BW Buyer in the past 2 years. The Supplier is also responsible for flowing this requirement down to their sub-suppliers where appropriate.

27 Import/Export Requirements

The Supplier must comply with U.S. federal regulations and orders, and other trade laws in all jurisdictions in which we operate, regarding selling to, trading with, or otherwise doing business with countries or nationals listed on the U.S. Office of Foreign Assets Control ("OFAC") list of Specially Designated Nationals and Blocked Persons ("SDN List"). In particular, no Supplier may sell to, trade with, or otherwise conduct business with (including engaging in discussions or conversations with) any person or company located in or owned by individuals in countries subject to sanctions by the U.S. Department of State or Department of the Treasury.

Supplemental Requirements

Please notify your BW Buyer or supplier quality engineer to confirm or obtain the latest revisions of any BW specifications noted below.

Q0001: Source inspection is required for this order. Please coordinate with your supplier quality representative to arrange the inspection date and time at least 48 hours prior to the planned shipment date.

Q0002: Welding workmanship shall be in accordance with AWS D1.1-Latest Version (Structural Welding Code - Aluminum)

Q0003: Welding workmanship shall be in accordance with AWS D1.2-Latest Version (Structural Welding Code – Sheet Steel)

Q0004: Welding workmanship shall be in accordance with AWS D18.3-Latest Version (Welding of Tanks, Vessels, and Other Equipment in Sanitary (Hygienic) Applications)

