## **QUALITY CONTROL MANUAL**



## MIDWEST INDUSTRIAL SUPPLY, INC. CANTON, OHIO

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#### 1.0 INTRODUCTION

#### 1.1 General

Today, Midwest industrial Supply, Inc. is a premier supplier of soil stabilization, dust and erosion control, soil remediation, and anti-icing/deicing products and services well suited for the 21st century.

Midwest has built its successful portfolio around:

- A premium and reliable product line
- > Superior application knowledge
- > Unmatched service and performance capabilities
- Custom services and formulations
- Full service turn-key operation, and
- > Innovation

Midwest's headquarters are located in Canton, Ohio with satellite operations in Santa Maria, California; Wheatfield, Indiana; Owensboro, Kentucky; Ecorse, Michigan; and Houston, Texas.

#### 1.2 Scope and Applicability

This manual shall apply to all products and services tendered by Midwest Industrial Supply, Inc.

This manual outlines the procedures and systems used to effect and maintain a quality system that ensures that the products and services supplied by Midwest Industrial Supply. Inc. meet all customer, regulatory, contract, and specification requirements. Contract requirements in excess of the established Midwest Industrial Supply, Inc. quality system shall be implemented through contract-specific instructions applicable to only the affected contract or program. The quality program at Midwest Industrial Supply, Inc. is subject to continuous review by Midwest Industrial Supply, Inc. management, as well as Customer Representatives.

#### 1.3 Change Control

The Management Team, prior to release, shall authorize all revisions and issues of this Quality Manual. Periodic reviews of this Quality Manual are performed to confirm compliance with current contract requirements, company policy and/or quality standards. Any new revision cancels and supersedes all previous issues.

The Quality Manual resides electronically in the Midwest Industrial Supply, Inc. Network. The electronic copy of the Quality Manual is the official version and, while printed copies can be retrieved, they are annotated with the warning that they may not be the latest issues. In the event hard copy versions of the Quality Manual are required they will be controlled.

#### 2.0 REFERENCES

The system described herein is supported by a series of policies and functional work instructions that implement the quality system. Applicable Operating Practice Procedures (OPP's) are referenced in this manual as the implementing documentation following each of the quality system requirements of paragraph 3.0.

#### 3.0 QUALITY SYSTEM REQUIREMENTS

#### 3.1 Management Responsibility

#### 3.1.1 Quality Policy

The executive management of Midwest Industrial Supply, Inc. has established the following quality policy:

Midwest Industrial Supply, Inc. is dedicated to providing our customers with proprietary, leading edge, bundled product and service solutions of the highest quality, reliability, ontime, at a price the customer wants. This is achieved through implementation and maintenance of a documented quality system that is integrated into all phases of our business process.

Midwest Industrial Supply, Inc.'s management is responsible for ensuring that this policy is communicated and understood by all employees.

#### 3.1.2 Organization

#### 3.1.2.1 Responsibility and Authority

A horizontal organizational management philosophy provides the freedom and authority for personnel who manage, perform and verify work-affecting quality. This includes identifying problem areas, initiating corrective and preventive action, and verifying the implementation of solutions.

The Management Team, is responsible for the implementation and administration of the quality system, including this Quality Manual, and has final decision authority for all matters regarding the quality of our products and services.

The Midwest Industrial Supply, Inc. quality system is implemented and maintained across all business activities from product development through production, to field deployment and support. Where appropriate, Midwest Industrial Supply, Inc. employs product development processes in which all functional disciplines, through empowered teams, integrate and concurrently apply the necessary processes to produce an effective and efficient product and service package through teamwork and commitment to a common goal.

#### 3.1.2.2 Resources

The management of each function has the responsibility to identify and provide the resources required to accomplish company and contractual objectives. This includes the assignment of trained personnel for management, performance of work, and all verification activities.

#### 3.1.2.3 Management Representative

Midwest Industrial Supply, Inc.'s executive management has designated members of the Management Team as Management Representatives for the quality system. The Management Representatives have the authority and responsibility for reporting on the performance of the quality system to executive management. This information may be used as a basis for improvement of the quality system. The Management Representatives also serves as liaisons for all quality system matters with customers and other external parties.

#### 3.2 Quality System

#### 3.2.1 General

The Midwest Industrial Supply, Inc. Quality System is established and maintained to ensure that Midwest Industrial Supply, Inc. products and services comply with internal standards and customer contractual requirements. The Quality System is documented in this Quality Manual, including its references, and in other functional and program procedures, work instructions and specifications.

#### 3.2.2 Quality System Procedures

The Midwest Industrial Supply, Inc. Quality System is implemented through a hierarchical series of documentation as outlined below:

- Level 1 Quality Manual; This document contains the top level policy statements defining the overall quality system.
- Level 2 Operating Practice Procedures (OPP's); These procedures are issued to comply with Level 1 requirements and/or to satisfy business and administrative needs.
- Level 3 Functional Manuals, Procedures and Work Instructions; These documents provide the direction needed for effective and compliant operations.
- Level 4 Quality Records; Quality Records provide the documented objective evidence of activities performed and results achieved.

This Quality System structure supports the quality policy.

#### 3.2.3 Quality Planning

All contracts, customer orders and related specifications/standards are reviewed to identify and understand the specific customer quality requirements. Specific program direction is conveyed to all functional teams or disciplines to allow them to plan and make provisions for special products, processes, fixtures, resources and skills. Additionally, this planning process allows for improvement and/or updating of inspection and test techniques to assure compliance to quality standards. When deemed necessary, a quality plan will be prepared detailing the system required to ensure implementation of any specific program requirements.

#### 3.3 Contract Review

#### 3.3.1 General

Procedures have been established for contract review and for the coordination of these activities. The assigned project management team leader serves as the focal point for communication with our customers for contractual commitments.

#### 3.3.2 Review

Prior to the submission of a proposal, reviews are conducted to ensure that customer requirements have been appropriately addressed and that Midwest is capable of meeting the requirements.

Contract reviews are conducted both prior to and upon receipt of award. Program related contractual documents are routed to appropriate functional and program/project management personnel for review and approval. Contractual document reviews are performed to determine if pricing, schedules, and terms and conditions are acceptable, and those requirements are properly referenced, acceptable, and appropriate. A properly executed contractual document (or applicable portions) is distributed to appropriate functional disciplines and program/project office personnel.

Upon receipt of the formal contract document for execution, the project management team leader performs a review to ensure that changes agreed to during negotiations have been included and that no new language, not previously reviewed, has been incorporated by the customer.

#### 3.3.3 Records

The assigned responsible individual in Sales Associate maintains records of contract review.

#### 3.4 Design Control

#### 3.4.1 General

The overall requirements for product and service performance are extracted from analysis of customer provided and internally generated information, such as concept of operation, statement of work, and specifications. The objective of the analyses is to provide an optimum solution considering constraints such as customer needs, cost, technology, and schedule. The unique needs of each program are tailored from the standard processes and defined in a Site Application Plan (SAP).

#### 3.4.2 Design and Development Planning

Each program follows a basic process of planning. The primary planning vehicle for programs is a SAP. These plans may be stand-alone documents or composed of individual documents.

A SAP typically provides a schedule, program organization, responsibilities, subcontract and vendor plans, data reporting requirements, work to be completed, and how resources are allocated.

#### 3.4.3 Organizational and Technical Interfaces

Technical program management is responsible for establishing, documenting and reviewing organizational and technical interfaces and integrating specialty engineering support, i.e., safety, test, reliability, logistics, etc

#### 3.4.4 Design Input

The design process begins with the collection and analysis of requirements. Sources may include customer requirements extracted from specifications, customer need, and concept of operations or as defined in the contract. Requirements may be explicitly stated or derived from performance specifications or contract language. Program personnel also may determine that additional requirements are necessary to satisfy commercial standards, Federal or State statutes and regulations, or to implement "best practices".

#### **Implementing Documentation:**

Site Application Plan Application Manual

#### 3.5 Purchasing

#### 3.5.1 General

The Midwest Industrial Supply, Inc. procurement process is supported by documented procedures which are established and maintained to ensure that purchased products meet specified requirements that represent the best value to our customers.

#### 3.5.2 Evaluation of Subcontractors

All purchases of materials, parts, components and services to be delivered shall be placed with vendors that have been evaluated and approved. Approval is based on an evaluation of the

vendor's ability to meet quality, technical, service, schedule and cost requirements. The methods of vendor evaluation can include a physical survey of the vendor's facility, a review of the satisfactory quality history of comparable procurements, a verification of satisfactory financial/business performance, or other sources of valid quality performance.

The level of control to be exercised over vendor may depend on the complexity of the product being procured the sophistication of the vendor's quality system, or the impact of the procured item on the final product.

#### 3.5.3 Purchasing Data

Midwest Industrial Supply, Inc. utilizes detailed procurement documents for the acquisition of products and services. A purchase requisition form is generated which contains a complete description of the product or services to be purchased. These requirements are incorporated into formal purchase orders that document the terms and conditions of the purchase. Purchase orders shall contain a complete description by statement or reference of the items ordered.

#### 3.5.4 Verification of Purchased Product

Purchased materials and products are appraised upon receipt or at the vendor's premises to verify compliance with drawings, specifications and quality standards.

#### **Implementing Documentation:**

Requisition and Purchase Order Forms Purchasing Procedures Raw Material Quality Sheet

#### 3.6 Product Identification and Traceability

Procedures are maintained for identifying products during all stages of production, delivery and installation. Every customer order is identified with a unique job number. Job numbers are assigned and controlled in accordance with these procedures and customer requirements. Individual containers (i.e.: drums, totes, bulk containers) are marked or packaged with their own identification numbers and job numbers, as applicable. Part identification requirements may vary with specific customer contracts.

For items requiring traceability, procedures are utilized to identify individual product or batches. This identification is maintained by means of part numbers, batch or lot numbers, or serialization, as applicable. Traceability identification is recorded and maintained through all operations.

#### **Implementing Documentation:**

OPP 1300 Product Identification and Traceability

#### 3.7 Process Control

Midwest Industrial Supply, Inc. production, installation and servicing processes are planned and identified to ensure they are performed under controlled conditions. Controlled conditions include the following considerations:

a. Documented Procedures: Work instructions recessary to ensure a quality product will be identified and documented. Work orders and batch sheets are created which serve as the work instructions that define the necessary operations to assure effective and consistent manufacture of product

#### 3.7 Process Control (con't)

- b. Work Environments and Suitable Equipment: Production is conducted under appropriate work conditions including cleanliness, safety and environmental controls, and utilizing appropriate tools and equipment.
- c. Compliance with Standards: Production work is routinely verified to ensure requirements are being met.
- d. Monitoring and Control of Process Parameters and Product Characteristics: Materials and products are subjected to systematic inspection and/or process monitoring to ensure that adequate control of production equipment is maintained. Certification and surveillance of processes, equipment, and personnel are performed as required to meet applicable requirements.
- e. Approval of Processes and Equipment: Documentation and records for processes and equipment requiring approval are maintained by the approving organization.
- f. Workmanship Criteria: Criteria for workmanship will be provided for manufacturing, services and inspection operations. These criteria provide a means to validate the acceptability of work.
- g. Equipment Maintenance: Tools and equipment are considered for routine maintenance, periodic inspection, calibration, modification, or replacement.

Processes that cannot be fully verified by inspection and test are performed by certified personnel and/or equipment or are continuously monitored to ensure compliance with requirements. When certified equipment and/or personnel are required, appropriate training and certification will be performed.

#### 3.8 Inspection and Testing

#### 3.8.1 General

Midwest Industrial Supply, Inc. maintains documented procedures for inspection and testing activities to ensure that product and service specifications and requirements are met. Product and

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process specific inspection and test plans are generated based on program and/or process requirements. These plans serve as the instructions for verification of product and provide the criteria for acceptance and rejection.

#### **Implementing Documentation:**

OPP 1400 Inspection and Testing Site Application Plan (SAP)

#### 3.8.2 Receiving Inspection and Testing

Purchased materials and products are appraised upon receipt to verify compliance with drawings, specifications, and quality standards specified. Inspection criterions are developed by Quality Assurance and are based on the requirements of the quality plan and/or applicable procedures.

#### 3.8.3 In-Process Inspection and Testing

Product is inspected and tested in accordance with documented procedures. Product is held at inspection and test points pending completion and acceptance of the required verifications.

#### 3.8.4 Final Inspection and Testing

Completed products are subjected to final inspection and test, in accordance with established procedures, which measure overall conformance to end product specifications. Product does not proceed until all inspection and test requirements have been satisfactorily completed and the associated data and documentation has been properly recorded.

#### 3.8.5 Inspection and Test Records

Records are maintained as prescribed by internal and/or contractual requirements, and provide the evidence that product has been inspected and/or tested. These records will clearly indicate whether verification activities resulted in acceptance or rejection. All rejected material will be handled in accordance with nonconforming material control procedures.

#### **Implementing Documentation:**

Incoming Raw Material Quality Sheets Finished Product Quality Sheets

#### 3.9 Control of Inspection, Measuring and Test Equipment

#### 3.9.1 General

Midwest Industrial Supply, Inc. maintains a calibration system to control, calibrate and maintain inspection, measuring and test equipment used to demonstrate conformance of products.

#### 3.9.2 Control Procedure

Inspection, measuring and testing equipment is uniquely identified and calibrated at prescribed intervals using standards of required accuracy, stability, range and resolution for the intended use.

Equipment calibrations are performed in controlled environments suitable for the calibrations, inspections, measurements and tests being performed.

#### 3.10 Inspection and Test Status

Midwest Industrial Supply, Inc. maintains a system to identify the inspection and test status of product throughout production, installation and servicing to ensure that only acceptable product is used.

#### **Implementing Documentation:**

OPP 1450 Inspection and Test Status

#### 3.11 Control of Nonconforming Product

#### **3.11.1** General

Midwest Industrial Supply, Inc. maintains procedures that ensure nonconforming product is prevented from inadvertent use or installation. All nonconforming product is controlled through identification, documentation, evaluation, segregation (when practical), disposition and notification of concerned functions.

#### 3.11.2 Review and Disposition of Nonconforming Product

Nonconforming product is identified and recorded. All work on nonconforming product is stopped until a disposition has been authorized. Product that has been repaired or reworked is reinspected/re-tested in accordance with established procedures.

#### **Implementing Documentation:**

OPP 1900 Control of Nonconforming Product

#### 3.12 Corrective and Preventive Action

#### **3.12.1** General

Midwest Industrial Supply, Inc. maintains procedures for implementing corrective and preventive action. The corrective and preventive action system is designed to identify and correct service or product deficiencies, and to improve service or product quality by precluding their recurrence.

Corrective and preventive actions taken are based on the magnitude of the problem and commensurate to the risks encountered.

#### 3.12.2 Corrective Action

Corrective actions are taken in response to adverse quality trends, customer complaints and product/service nonconformities. Corrective actions address the root cause, the specific nonconforming condition and similar conditions in other areas, as applicable, to eliminate recurrence, or unfavorable trends. All corrective actions are investigated, corrected and subject to follow-up verification to ensure implementation and effectiveness.

#### 3.12.2 Corrective Action (con't)

Product compliance data is obtained from internal inspection and test results, and from customer feedback. Process and quality system compliance data is gathered from internal and customer audit processes. Thorough analysis of the root cause and appropriate actions from these input sources form the basis of the corrective action system.

#### 3.12.3 Preventive Action

Preventive actions are taken to eliminate the causes of potential nonconformities, defects or other undesirable situations in order to prevent occurrence. The Midwest Industrial Supply, Inc. preventive action system includes:

- a. Evaluating processes and work operations to provide information on product quality and potential causes of nonconformities. This includes performing audits and analyzing audit results, quality records, and customer complaints.
- b. Recording, analyzing, and identifying potential problems, and presenting to management relevant information concerning significant preventive actions.

Relevant information on preventive actions taken is submitted for management review.

#### 3.13 Handling, Storage, Packaging, Preservation and Delivery

#### **3.13.1** General

Midwest Industrial Supply, Inc. has established and maintains procedures that describe the means to handle, store, package, and preserve and deliver product.

#### 3.13.2 Handling

All material is handled in a manner that prevents damage or deterioration. This includes the use of proper containers and other protective devices for handling and transporting of product. Special handling procedures are employed for materials sensitive to environmental conditions, cleanliness and age deterioration.

#### **3.13.3 Storage**

Designated storage areas are utilized which provide adequate physical and environmental protection to prevent damage or deterioration of product. Procedures are in place to ensure that receipt to and dispatch from such storage areas are controlled. Cycle counts and periodic audits ensure that stored items are assessed to detect deterioration.

#### 3.13.4 Packaging

Finished products and materials are packaged and marked in compliance with customer or regulatory requirements. Packaging designs provide protection against damage, deterioration or contamination, and include the means for accommodating, maintaining and identifying materials that require special consideration. Compliance to packaging requirements is verified prior to delivery of product.

#### 3.13.5 Preservation

Proper preservation methods are employed to prevent deterioration of product. Techniques for preservation include maintenance of an age sensitive control program to ensure that materials are controlled with respect to limited life requirements in both the production and development environments. This control program prevents the accumulation of out of date material throughout the facility.

#### **3.13.6 Delivery**

Finished products that have successfully passed final inspection and test are provided the protection necessary to ensure that the quality of the product is maintained through delivery to the destination defined by customer requirements.

#### **Implementing Documentation:**

Material Safety Data Sheets Work Orders, Delivery Orders, Shipping Documents, and Invoices

#### 3.14 Control of Quality Records

Quality records and samples are maintained to demonstrate conformance to specified requirements and the effective operation of the Quality System. Pertinent vendor quality data is included in these records.

Procedures are maintained for the identification, collection, indexing, access, filing, storage, maintenance and disposition of quality records and samples. These procedures ensure that the quality records and samples are readily retrievable and that the storage facilities provide a suitable environment to prevent loss or avoidable damage. Quality records and samples will be retained indefinitely.

#### 3.15 Training

Midwest Industrial Supply, Inc. regards the development of a highly qualified work force to be essential in maintaining the quality of its products and services. Management is responsible for identifying functional and individual training needs for all personnel performing activities affecting quality, and assuring that these needs are met. Training requirements are based upon the business needs, the identification and maintenance of skill requirements, job position descriptions, and position certification (where necessary). Various training programs are available from

#### 3.15 Training (con't)

multiple sources, such as, internal, or externally from qualified experts, colleges, and technical institutes. On-the-job training and certifications are also part of the training program.

Personnel performing specific assigned tasks are qualified on the basis of education, training, or experience required by the job.

#### 3.16 Servicing

Midwest Industrial Supply, Inc. provides support services such as operations and maintenance support, technical support, and special testing.

When unique support requirements are specified by contract, program specific procedures will be established and maintained to define the processes required for postproduction support.

Servicing procedures will identify the methods for performing, verifying and reporting that servicing meets the specific requirements.

#### 3.17 Statistical Techniques

Midwest Industrial Supply, Inc. employs statistical techniques, as necessary, to monitor key product and process parameters, and reduce the cost of inspection where sampling of characteristics is appropriate for control. Appropriate Engineering, Operations and Quality personnel are responsible to identify the need for employing statistical techniques.