

DeFoe Corp.

800 South Columbus Ave. Mount Vernon, NY 10550

## **QUALITY ASSURANCE**

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### **SECTION I - QUALITY MANAGEMENT SYSTEM**

#### 1.1 General Requirements

DeFoe Corp. has established, documented, implemented, maintained and is continually improving its Quality Management System in accordance with the requirements of the ISO 9001-2000 standard. In order to implement the Quality Management System **DeFoe Corp.** has developed the following matrix that identifies:

- The process needed for the Quality Management System;
- The sequence and interaction of these processes;
- The criteria and methods to ensure effective operation and control of the processes;
- Availability of information necessary to support the effective operation and monitoring of these processes;
- Methods of measurement, monitoring and analysis needed in order to implement those actions that will achieve planned results and continual improvement.

<b>Quality Process</b>	<b>Objectives</b>	<b>Risks to Achieve Objectives</b>	<b>Controls</b>	<b>Internal Measurement</b>
Project Documentation	Maintain Project Records	Failure to comply with DeFoe Corp. procedures	1.2.3	Internal Quality Audit Maintain Logs
Review Project Documents	Fully understand project requirements	Inexperienced Personnel	2.2	Identify problems and problem resolution. Proper training
Construction Inspection	Conduct Inspections and document results	Failure to inspect completely. Failure to understand construction methods	5.2.4	Inspection reports are completely filled out. Visual inspections of daily work

## 1.2 Documentation Requirements

1.2.1 DeFoe Corp. has established the following documentation for its quality management system.

- Quality Policy and Quality Objectives
- This Quality Management System Manual
- Documented Procedures as follows:
  - Planning, operation and process control documents such as:
  - scheduling & cost control tools
  - Records of Internal Reviews
  - Inspection & Test Reports
  - Internal/External Audit Reports & Corrective Action
  - Records

### 1.2.2 Quality Manual

DeFoe Corp. has established and maintained a Quality Management System Manual. The QMSM identifies the scope of the Quality Management System, and any exclusions to the requirements of ISO 9001-2000. It references documented procedures governing work activities. It includes a description of sequences and interaction of processes which fall under the scope of the Quality Management System.

The QMSM is a controlled document. The Project Manager is responsible to ensure the initial issue and subsequent changes are acknowledged by those authorized to receive the QMSM.

### 1.2.3 Control of Documents

A documented procedure shall be established to control documents required for the QMS. Project documents shall be maintained in file cabinets at the following locations; Home office and field office. Access to these files shall be limited to Project Manager, Superintendent and QC Engineer. As-built documents shall be maintained by Project Manager at the Home office. An Index of as-built documents shall be maintained as part of the file. As-built conditions shall be recorded on project documents by being marked with a stamp.

Annotated documents shall be verified for accuracy Project Manager and shall be transmitted to the Engineer-in-Charge. Only the latest authorized issue of Project Documents shall be available for use by Contractor personnel. Documents under review, voided documents or superseded documents shall be kept in the Home office with the Project Manager to prevent use onsite. The Project Manager is responsible to review all items for conformance to the Contract prior to transmittal to the Engineer-in-Charge. This review shall be indicated on each item by stamp. All documents transmitted to the MNRR Engineer for review shall use a transmittal form which identifies the item transmitted and the action to be taken by the Engineer-in-Charge. The Document status shall be updated based on transmittal information. The Project Manager is responsible for reviewing the Contract and identifying submittals and deliverables to be transmitted to the Engineer-in-Charge. A submittal log will be kept by the Project Manager to control this activity. DeFoe Corp. will use **Primavera Contract Manager Software** to track the status of any item. Items that have not been approved will not be released for fabrication and delivery.

### 1.2.4 Control of Records

Project Records shall be stored in a suitable environment to prevent damage or deterioration and to prevent loss. Records shall be filed by subject. An Index of Project Records shall be part of the File. Responsibility for the accuracy and completeness of the Records is assigned to the QC Engineer. Access to records shall be under control of the QC Engineer. Removal of Records to a location other than the immediate area where the file is located shall be restricted to authorized persons. Measures to identify removed files and their current location shall be maintained. The Project Manager shall identify those records to be transmitted to the Engineer-in-Charge upon completion of the Project and transmit the appropriate Records. DeFoe Corp. records which provide evidence of conformance to requirements and of the effective operation of the companies Quality Management System shall be identified, stored, protected and retained. Retrieval will be controlled. The QC Engineer is responsible for identifying the records to be retained, retention time, disposal method, and for arranging for their protection and controlled retrieval.

## SECTION 2 - MANAGEMENT RESPONSIBILITY

### 2.1 Management Commitment

The Top Management of DeFoe Corp is committed to the development and improvement of the Quality Management system by:

- Communicating the importance of meeting customer, regulatory and legal requirements by following all plans and specifications as required, along with obtaining all necessary permits and approvals from local agencies.
- Establishment of a quality policy and quality objectives specific to this project.
- Conducting management reviews in accordance with Paragraph 2.6 of this QMSM.
- Ensuring the availability of necessary resources in accordance with Section 3.0 of this QMSM.

### 2.2 Customer Focus

DeFoe Corp. ensures customer satisfaction by:

1. Review of Contract Requirements and our QMSM and procedures for compatibility. Making modifications as deemed appropriate
2. Allocating trained and qualified staff resources to perform project tasks.
3. Scheduling and reporting progress in sufficient detail to control project cost.
4. Training personnel as required.
5. Performing Internal Quality Audits at intervals which shall ensure compliance with Quality Plan.
6. Establishing a program for problem identification and resolution and problem prevention.
7. Maintaining data control systems and records of project activities.
8. Customer input/feedback

### 2.3 Quality Policy

The DeFoe Corp. has the following policy regarding the Quality of the goods and services we offer our customers.

*“DeFoe Corp. is committed to satisfying all customer specifications in the performance of all contracted work and maintaining a safe, reliable, and environmentally sound work place”*

This Policy is understood, implemented and maintained at all organization levels. It is issued to department heads, posted in highly visible area in the work place and is accomplished using properly trained personnel to perform the tasks to which they are assigned.

## 2.4 Planning

### 2.4.1 Quality Objectives

Top Management of DeFoe Corp. has identified the following Quality Objectives for the Project. The objectives are measurable, consistent with policy, relevant to the successful completion of the project and attainment of objectives is considered as part of our effort for improvement:

- meeting contract requirements
- resource allocations
- cost control
- schedule control

### 2.4.2 Quality Management System Planning

The elements that comprise the Quality Planning process are this QMSM, Project Organization Charts (see Exhibit A) which described personnel allocations, titles of individuals, subcontractors/sub consultants necessary to complete the work and the integration of Quality improvement initiatives described in Paragraph 2.6 Management Review and 5.2 Measurement & Monitoring. When conditions require change, the process is controlled and integrity of the Quality Management System is maintained. If personnel are changed than the project organizational chart will be revised. Changes to the project work scope are handled by changes in our submittal logs.

## 2.5 Responsibility, Authority and Communication

### 2.5.1 Responsibility and Authority

DeFoe Corp. is organized in the following manner. Executive Vice President is responsible for maintaining the Organization Charts (See Exhibit A). DeFoe Corp. has assigned responsibilities and authority in the following manner:

- The Executive Vice President is responsible for quality program review and effective implementation.
- The General Superintendent reports to the Executive Vice President and is responsible for manpower and equipment needs on the construction site.
- The Project Manager (PM) reports to the Executive Vice President. The PM has the responsibility of the administrative field operations on a day to

day basis. The PM estimates the project cost, negotiates and writes all subcontracts and purchase orders required to build the project. The PM procures schedules and tracks all contract submittals required by the contract documents, including subcontractors and material suppliers. The PM is responsible for all engineering designs and submittals. The PM is responsible for developing and updating the project schedule. The PM coordinates field measuring, shop drawings and releases materials for fabrication.

- The Project Superintendent reports to the General Superintendent on all daily activities on the construction site. The Project Superintendent coordinates all job activities, manpower requirements, material deliveries, schedule enforcement and equipment needs to assure a smooth, orderly workflow. The Project Superintendent will be responsible for preparing the daily activity diary.
- The Quality Control Engineer (QCE) reports to the Executive Vice President. The QCE will be responsible for the day to day quality activities on site. Furthermore, the QCE will be responsible for incoming inspection, in process inspection, final inspection, calibration, internal auditing, reporting and analysis of discrepant processes, and material. The QCE also has the responsibility and authority to halt activities to prevent installation on no-conforming processes or material pending their resolution.
- The Project Foreman implements the Project Superintendents coordination efforts. The foreman has the first line responsibility for all field personnel and for material needs to start, continue and finalize construction. The foreman assists the Quality Engineer with deliveries, material management, and correction of Non-conformances.

## 2.5.2 Management Representative

DeFoe Corp. has assigned the Project Manager as the management representative for Quality. He/she shall ensure the Quality system is established, maintained, and implemented and shall report to top management on a biannual basis and make recommendations for Quality System improvements. Reports shall be issued in writing top management and maintained in an open status until the resolution of outstanding items. The management representative for Quality shall assure that the Project Team is aware of customer requirements regarding the Project.

## 2.5.3 Internal Communication

The Company ensures the processes of the Quality Management System and their effectiveness are communicated throughout the organization by distribution of audit reports and Management reviews

## 2.6 Management Review

### 2.6.1 General

DeFoe Corp. top Management shall review the Quality Management System at least once a year and more often as needs dictate to ensure its suitability, adequacy and effectiveness. The Quality Management System, quality policy and quality objectives will be evaluated for any needed change. Records of these reviews shall be maintained.

### 2.6.2 Review Input

Management Reviews shall utilize:

- internal and external Quality Audit results
- customer performance evaluations (feedback)
- process performance and product conformance results
- preventive and corrective action status
- follow up on actions from previous Management Reviews
- Other changes (i.e. business climate, scope of work changes, etc) that could affect the Quality Management System

### 2.6.3 Review Output

Results of Management Reviews shall be recorded and address as appropriate

- improvements in the Quality Management System and its processes
- improvements in product related to customer requirements
- resource needs

Action items should be followed up at subsequent management reviews to ensure closure.

## **3.0 RESOURCE MANAGEMENT**

### 3.1 Provision of Resources

The Superintendent is responsible to assess organizational and project needs including oversight functions and develop resource requirements in order to assure resources necessary to implement and improve the processes of the Quality Management System and address customer satisfaction issues are provided in a timely manner.

### 3.2 Human Resources

#### 3.2.1 General

DeFoe Corp. shall assign personnel to the projects that are competent on the basis of applicable education, training, skills and experience. The Project Manager is responsible to review the Agreement/Contract to determine any customer requirements for competency of personnel assigned to the project and the work scope to determine the competency level of other personnel assign to the Project and ensure the assignment of personnel who meet the requirements.

### 3.2.2 Competence, Awareness and Training

DeFoe Corp. shall:

- Identify competency needs for personnel performing activities affecting quality. DeFoe Corp. has developed position descriptions for those personnel performing activities affecting quality which identify competency requirements. The Project Manager maintains the latest issue of such position descriptions.
- Provide training to satisfy competency needs. Superintendent is responsible to identify training needs and assure training is performed. Training will be provided by toolbox talks, technical representatives on the jobsite, union classes and apprenticeships.
- The effectiveness of training will be evaluated based on internal audit indications of noncompliance, nonconformance and failure to satisfy the customer.
- Employees are kept aware of how their work activities contribute to the achievement of quality objectives by attending job progress meetings.
- Maintain records of education, training skills and experience. Superintendent is responsible to ensure appropriate records including records of training activities and the subject matter of the training are maintained.

### 3.3 Infrastructure

DeFoe Corp. only uses modern computer software and hardware. Tools and equipment are maintained and replaced to ensure a high quality product.

### 3.4 Work Environment

The work environment must be kept clean, organized and safe. This is assured utilizing weekly tool box meetings and safety inspections.

## 4.0 PRODUCTION REALIZATION

### 4.1 Planning of Product Realization



DeFoe Corp. shall plan and document the product realization process. The documentation for the realization process is this QMSM. The Quality objectives for the construction are identified in the Contract. The construction process, documentation, resources and facilities shall be established for this project. It includes but is not limited to: the QMSM, field office, required staff and workforce, CPM, etc... Verification and validation are incorporated into the planning process as follows:

- Review during the estimating process
- Approvals
- Planned Inspections and testing
- Review in accordance with the project QMSM

Acceptance criteria will be developed where appropriate for the following activities:

- Structural Steel Installation
- Structural Concrete
- Asphalt Paving

And product acceptance documented by:

- Progress Reports
- Forecast Reports
- Review of submittals
- Communication with the Engineer

Records attesting to conformity of process and resulting product shall be maintained by the Project Engineer. Records will include:

- Internal Quality Audit results and closure
- Product Acceptance Records
- Records of Management Reviews

## 4.2 Customer Related Processes

### 4.2.1 Determination of Requirements Related to the Product

DeFoe Corp. will review the Contract to determine customer requirements. The Project Manager will evaluate these requirements and determine any additional requirements including regulatory and legal ones, which may not have been identified by the customer, need to be implemented to support the delivery of the construction.

### 4.2.2 Review of Requirements related to the Product

DeFoe Corp. has assigned the responsibility to review bid documents to the Project Manager. The Project Manager shall ensure that the requirements are understood, and that we have the capability of performing the work. The review shall be documented as outlined in this document. Prior to signing the Contract a review shall be performed by Project Manager to ensure any agreed to changes have been incorporated. The review shall be documented as outlined in this document. Changes to the Contracts shall be controlled. The Project Manager is authorized to accept changes to the Contracts. Changes shall be documented and issued to all staff responsible for execution of the Original Contract by project Manager.

#### 4.2.3 Customer Communication

The Project Manager is responsible to establish and maintain communication with the Engineer-in-Charge or representative construction activities. Communication process established in the Contract shall be implemented. The Project Manager is responsible for evaluation of customer feedback/complaints and responses to them.

#### 4.4 Purchasing

##### 4.4.1 Purchasing Process Subcontractor/Supplier Services:

Where Subcontractors/Suppliers are engaged to work on this project their capability to perform the assigned scope of work is evaluated by the Project Manager. Records of this evaluation are maintained by the Project Manager. Records of Subcontractor/Supplier performance shall be maintained by the Project Manager. Subcontractors/Suppliers with a record of poor performance shall be excluded from future consideration. Evaluation criteria are defined by the contract. Evaluation takes place on a timely basis. The Project Manager is responsible to follow up on identified areas of poor performance.

##### 4.4.2 Purchasing Information

Subcontract agreements with subcontractors and Purchase Orders with suppliers will define product requirements, Quality Management System Requirements, applicable procedures, processes, and equipment and personnel qualifications in sufficient detail to ensure the work performed meets the purchase order requirements. Each supplier/subcontractor are evaluated on the bases of their Quality Control Plan and their ability to furnish and execute their contracted work. On this Project, the Subcontractors/Suppliers shall be performing work under this QMSM. The Project Engineer shall incorporate the scope of services performed by the subcontractor/supplier into the requirements of the QMSM. The conformance of the subcontractor/supplier to this QMSM is

subject to internal Quality Audits. Areas of noncompliance shall be resolved to the satisfaction of DeFoe Corp. and records maintained.

#### 4.4.2 Verification of Purchased Product

Work prepared by the suppliers/subcontractors shall be reviewed for conformance to Agreement/Contract requirements and accepted by the Project Manager and documented in accordance with the DeFoe standard.

#### Materials & Equipment

The Superintendent is responsible to ensure that the equipment and materials ordered for this project under this Contract meet Contract requirements and are delivered on time. Purchase Orders shall be reviewed by the Superintendent prior to issue. The following steps shall be taken to ensure that the suppliers are capable of providing appropriate items.

1. Manufacturer/Supplier capability to supply items which meet technical requirements in a timely manner shall be evaluated.
2. The Manufacturer/Supplier has a Quality Program which shall be evaluated by the Project Engineer.
3. Equipment/Material delivered for use on the project shall be inspected by Superintendent at the project site for form, fit and function as related to contract requirements. Rejected Equipment/Material shall be returned to the originator or marked in a manner that shall prevent use.

#### 4.5 Production and Service Provision

##### 4.5.1 Control of Production and Service Provision

DeFoe Corp. has established the following controls applicable to Construction activities:

- Activities are planned
- Activities are scheduled
- Acceptance Criteria defined
- Adequate resources (tools, equipment, trained personnel) are available to perform the work.
- The work environment is safe and conforms to the Health & Safety requirements in the Contract/Agreement.
- Methods are employed to monitor resource expenditure against expected results
- Procedures, work instructions, installation practices which are important to ensure quality work are available to the work force
- Codes standards and other references, including applicable portions of the Contract/Agreement, are available to the work force

- Standards of workmanship are implemented
- Where required, licensed or certified personnel are assigned to the project to perform activities requiring such license or certification
- A program to monitor the effectiveness of these process controls is in place and implemented.
- Criteria for release, approval, acceptance is established

#### 4.5.2 Validation of Processes for Production and Service

The validation of certain construction processes can only be ascertained when load is applied or operation is initiated.

DeFoe Corp. assures these processes can achieve planned results through:

- Process qualification
- Equipment & personnel qualification
- Defined methods & procedures
- Field sample development
- Records shall be maintained and revalidation performed as necessary

#### 4.5.3 Identification and Traceability

DeFoe Corp. shall develop, maintain, and implement a system to identify construction materials, products and equipment to the extent required by the Contract or applicable codes and standards. Nonconforming materials shall be identified or removed to prevent inadvertent use. Proper Submission to the Engineer-in-Charge of all material, products, and equipment to be used. Approval of all material, products, and equipment before arrival at the site. Inspection of all material, products and equipment to insure compliance with approvals and contract requirements. Assignment of a system of piece marks for identifying all material, products, and equipment to be used. To the extent traceability is a contract requirement; DeFoe shall develop and maintain a system for unique identification of product or batches. The Project Engineer is responsible for implementing the system and retaining appropriate records. Nonconforming materials shall be identified or removed to prevent inadvertent use. Products and material will be inspected when they arrive to the jobsite by the Superintendent or Field Engineer. These materials will be checked for completeness, accuracy and any visible defects. The shipping ticket or Bill of Lading will be signed by the individual and filed in the office job file.

#### 4.5.4 Customer Property

DeFoe Corp. shall develop and maintain a system to receive, log, and maintain Engineer-in-Charge supplied documents, data, test equipment, materials or equipment. The Project Engineer is responsible for this function and shall advise the Engineer-in-Charge of any items that are unsuitable for use, lost

or damaged. The Project Manager is responsible for the final disposition of the supplied items at the conclusion of the project.

#### 4.5.5 Preservation of Product

DeFoe Corp. shall establish, maintain and implement a program for Handling, Storage, Packaging, Preservation and Delivery of materials and equipment on the project. All material and equipment shall be stored so that it will not suffer damage during storage, and minimizes exposure to weather and re-handling of the material or equipment. All material and equipment shall be handled in a manner so that it does not suffer damage, with special care paid to shop coatings applied to the material or equipment. The storage area should be neat and clean to facilitate identification of stored materials and equipment and reduce possible damage from debris. All handling and storage instructions shall be followed to avoid damage and to preserve warranties on the material or equipment. Craft supervision shall be responsible for assuring that craft personnel observe proper handling procedures to insure that material is not damaged in handling or storage. Where possible, material and equipment shall be ordered and packaged in such a way that storage needs and handling are minimized. Special packaging may include wrapping, shop coating of paint, special palletizing or crating, or special loading arrangements. The handling and storage of material shall be monitored by the Project Engineer and Superintendent.

#### 4.6 Control of Monitoring and Measuring Devices

DeFoe Corp. shall establish, maintain and implement a program to identify, control and calibrate measurement and monitoring devices used to assure conformity of product as required by the Contract/Agreement. The Program shall contain the following elements:

- Identification of what needs to be monitored and measured
- Identification of equipment & instruments that require calibration to maintain capability
- Listing of such equipment & instruments, frequency of calibration and evidence calibration took place
- Availability and use of manufacturers instructions, codes or national standards for calibration
- A program of corrective action to repair or replace items which do not meet acceptance criteria.
- A program to ensure measuring and monitoring devices are protected from damage deterioration and unauthorized alteration of settings.
- A program of corrective action for previously accepted product, if defective equipment and instruments were used to inspect or test the product.

- Confirmation that computer software used as a basis of product acceptance is acceptable for the intended application. Confirm prior to use and as necessary there after.
- Records to demonstrate calibration and verification

## **5.0 MEASUREMENT, ANALYSIS AND IMPROVEMENT**

### 5.1 General

DeFoe Corp. has defined, planned and implemented the following measurement, monitoring, analysis and improvement activities needed to assure conformity, and achieve improvement. Additional details are provided in 5.2., 5.3., 5.4, 5.5.

- Customer satisfaction surveys
- Internal Audits
- control of nonconformance
- data analysis
- Corrective, preventive and improvement activities

### 5.2 Monitoring and Measurement

#### 5.2.1 Customer Satisfaction

DeFoe Corp. has developed the following methods to obtain data and monitor customer satisfaction and/or dissatisfaction:

- Customer Correspondence
- Customer Survey
- B&T Performance Evaluation System results, etc.

#### 5.2.2 Internal Audit

DeFoe Corp. shall establish, maintain and implement an Internal Quality Audit Program to verify that quality activities and related results comply with planned contractual arrangements and to determine the effectiveness of their Quality Plan and associated procedures. The Internal Quality Audit Program shall have the following attributes:

- Written procedures shall govern these activities
- Internal quality audits shall be scheduled based upon status and importance of the activity to be audited. The schedule shall be transmitted to the TBTA Engineer. Note: The minimum number of Internal Quality Audits is once during the life of the Contract/Agreement or once a year on multi-year Contracts/Agreements

- Personnel conducting internal audits are capable of objectivity and impartiality in conducting the audit. They will not audit their own work.
- Reports of the results of Internal Quality Audits shall be generated and issued. Company management and the MNRR Engineer shall receive copies of the Reports.
- Corrective Action shall be monitored and brought to closure
- Follow-up Internal Quality Audits shall be conducted, as appropriate, to ensure implementation of Corrective Action and the results reported to top management.
- The activities of subcontractors working under this QMSM shall be included in the Internal Quality Audit Program.
- The activities of subcontractors working under their own QMSM shall be evaluated by DeFoe Corp. as described in Paragraph 4.4.1.

The Project Manager is assigned responsibility to implement the Internal Quality Audit Program.

#### 5.2.3 Monitoring and Measurement of Processes

This paragraph is applicable to all.

The product realization processes described in Section 4 of this QMSM necessary to achieve customer requirements are measured and monitored as follows:

- Internal Audit Results
- Error and Omission
- Punch Lists
- Non-Conformances

These methods shall confirm the continuing ability of each process to satisfy its intended purpose. When planned results are not achieved corrective prevention actions shall be taken to assure conformity.

#### 5.2.4 Monitoring and Measurement of Product

DeFoe Corp. shall establish, maintain and implement a program to control inspection and acceptance of equipment, materials, and construction activities performed by the Contractors own forces or their subcontractors. Records shall be maintained. The Superintendent shall insure that incoming equipment and materials are inspected and accepted for project use prior to incorporation into construction. The Process shall be documented by signed delivery ticket or signed invoice. During Construction the Superintendent shall inspect/evaluate the quality of the construction effort through periodic inspections of the work in

progress. Activities shall be recorded in the field on paper and acceptance verified against written acceptance criteria obtained from applicable Contract Documents or referenced Codes and Standards. The Superintendent shall also identify any point in construction that requires authorization of the Engineer-in-Charge before work can continue. Testing, if required in the Contract, shall be performed by qualified personnel to written procedures, with acceptance criteria defined and results identified and transmitted to the Engineer-in-Charge. Required testing will be performed by the Contractor or an independent laboratory under this Contract. Project Manager shall utilize the services of an outside agency to perform specified inspection and testing, if so required. All test results shall be documented on forms appropriate to the tests, dated and signed by test personnel. Results shall be issued as required in the Contract. The status of all inspections and testing shall be maintained by DeFoe Corp.

### 5.3 Control of Nonconforming Product

DeFoe Corp. has a program to detect and correct non-conforming conditions relating to work output of their own staff or others under contract to the DeFoe Corp. Any conditions that do not meet Contract requirements and which cannot be corrected by the end of the shift shall be documented in written form by the Superintendent and tracked to closure. Documentation shall be an entry in the Daily log. The Superintendent shall track the condition until restoration to the designed condition or until the "as-installed" condition is accepted by the Engineer-in-Charge. The Engineer-in-Charge shall be notified by e-mail of any condition that is requested to be accepted as an "as-installed" condition or any condition whose correction to Contract requirements shall adversely affect Project Schedule. Nonconformance discovered by outside sources shall be processed by the Superintendent Corrective Action shall be implemented as described in 5.5.2.

### 5.4 Analysis of Data

DeFoe Corp. collects and analyzes appropriate data to determine the suitability and effectiveness of its Quality Management System and to identify where improvements can be made in the QMS. The following data is gathered and analyzed, the QC Engineer is responsible for the effort and to ensure closure where QMS improvements are warranted. Data and analysis methods we will use:

- customer satisfaction/dissatisfaction
- conformity of product to requirements
- measuring & monitoring data
- trends of both positive and negative compliance
- Internal Quality Audit Data

### 5.5 Improvement



### 5.5.1 Continual Improvement

DeFoe Corp. facilitates continual improvement of the Quality Management System by assessing and acting upon the following:

- Quality Policy changes
- goal/objective changes
- implementation of the results of management review
- audit findings
- analysis of nonconformities
- corrective and preventive actions implemented

The Project Manager is responsible to assure implementation of this Planning for improvement effort.

### 5.5.2 Corrective Action

DeFoe Corp. has established a Corrective Action program to eliminate the cause of the nonconformity and thus prevent recurrence. Corrective action will be appropriate to the severity of the nonconformity identified. A documented procedure for corrective action has been established as described on this QMSM, subsection 5.5.2. The procedure addresses nonconformity identification (including customer complaints) cause determination, action to prevent recurrence, identifying and implementing the corrective action, recording results, determining if the corrective action was implemented and effective in resolving the nonconformity.

### 5.5.3 Preventive Action

DeFoe Corp. has a Program of Preventive Action which anticipates the potential causes of nonconformities and works to reduce or eliminate these potential causes. A documented Procedure for Preventive action has been established and maintained by the Project Manager. The Procedure identifies potential nonconformities, their probable cause, determination of preventive action needed, implementation of preventive action, determining if preventive action was implemented and effective in preventing nonconformity.