Engineered Metal Products Manufacturing
ASME: Code Stamps, U & R, Pressure Vessels, Tanks, Piping
Skids, Filter Housings, Specialty Equipment, Machine Frames
Steel, Stainless, Aluminum & Alloy Products

Built to customer Specifications:
National Labs, New Energy, Water Purification
Oil & Gas Processing, Well Head, Mining Equipment
Machine Manufactures, Heavy Equipment, Refrigeration
Public Works, Artistic Structures

QT-1 QUALITY MANUAL

Written to the Requirements of ISO 9001:2008

Revision: L

SPRINGS FABRICATION, INC.
850 Aeroplaza Drive
Colorado Springs, CO 80916

❑ **Controlled Copy – Manual Control No:_____**

Flynn Painter – Corporate Quality Manager

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Section 1 – Company Information

Since its founding in 1986, Springs Fabrication has grown from a two-man shop running out of a garage to approximately 200 highly skilled and qualified employees working out of a custom-designed facility. The Company utilizes the latest in manufacturing technology serving a prestigious list of clientele throughout the United States and Internationally.

Springs Fabrication has established a reputation for excellence in industries such as energy, water purification, chemical and petrochemical, mining, processing and filtration. Through responsiveness, quality, performance and value-added services, Springs Fabrication is able to enjoy mutually successful relationships with its customers.

Milestones highlighting the continuous growth of the organization include: ASME Certification in 1990, CNC plasma/punching in 1995, a custom-built manufacturing facility in 1997, 3D ProE engineering system in 1998 and ISO 9001:2000 certification in 2001. In 2005 & 2006, Springs Fabrication enhanced its machining capacity by installing large capacity CNC Horizontal Machining Centers, CNC Lathes, and CNC Vertical Machining Centers. Welding capabilities have been increased by the addition of a new Welding Positioner with a capacity of up to 40,000 lbs, and automated robotic welding systems. In 2007, SFI continued its growth by adding large capacity bridge mills making SFI one of the leaders for large capacity machining in the state of Colorado. 2008 has seen the expansion of facility capacity with the addition of 50,000 square feet of manufacturing floor space and updating its ISO 9001 certification to the 2008 version of the standard. Also included is a seventy foot high bay and installation of a 40 ton bridge crane.

Safety is a top priority at SFI, and the Company has invested substantially in material handling equipment, personal protective equipment, and safety training. SFI regularly evaluates its safety program to ensure that employees are working in a safe and healthful environment.

Springs Fabrication has numerous clients who look to its certified experts for continual improvement of their product. This type of sustained business is the backbone of the Company, and in these relationships, Springs Fabrication provides its customers with expertise in manufacturing and the ability to maximize their designs. With these kinds of projects, value-added engineering services are offered with the intent of streamlining a product or process in order to save the customer money.

By continually investing in new technology that offers more efficiency, Springs Fabrication maintains a competitive edge not only for itself, but for its customers, too.

The most up to date summary of business conditions and capabilities can be found on our web site,

http://www.springsfab.com/

Section 2 – Company Goal, System Scope, and Exceptions

Overall Company Goal

The goal of Springs Fabrication Inc., is to be profitable, now and in the future, by meeting the expectations of our customers by providing exceptional products and service in addition to continually improving our Quality Management System.

System Scope

This Quality Manual establishes a Quality Management System (QMS), which is registered to ANSI/ASQ Q9001-2008. The scope of the registration follows:

Design for Manufacture, Machining, Welding, and Manufacture of Fabricated Metal Products and Pressure Vessels

ISO Exceptions

ISO Section 7.3 Design and Development. As a contract manufacturer, Design control is the responsibility of the customer. Design for Manufacture is controlled by this quality system..

Section 3 – References and Definitions of Specific Terms

References

ANSI/ASQ Q9000:2005	Quality Management Systems – Fundamentals and Vocabulary
ANSI/ASQ Q9001:2008	Quality Management Systems – Requirements
ANSI/ASQ Q9004:2009	Quality Management Systems – Guidelines for Performance Improvements
BSR/ISO/ASQ 19011:2008	Guidelines on Quality and/or Environmental Management Systems Auditing)

Definitions of Specific Terms

CA PA	Corrective Action / Preventive Action
D/D	Design and Development
Graded Approach	A level of management control based on the following factors: safety, health, and hazard considerations, environmental compliance, and financial impact.
Organization, Company, SFI	These terms, where used in the QMS, denote Springs Fabrication, Inc
QMS	Quality Management System
Server	SFI's computer server(s) which store documents and records.
Standard	Where used with no other reference, this term denotes ANSI/ASQ Q9001:2008. In this context, it is always capitalized.

Section 4 – Quality Management System (QMS)

4.1. General Requirements: The SFI QMS described in this Manual and its subservient documents identifies, defines, implements, and manages the sequencing and interactions of various independent and/or interlinked processes used by the Company (see Appendix A) to provide products to our marketplace in accordance with the Standard. Provisions within the QMS prescribe methods to effect continuous improvement of the system's effectiveness.

4.1.1. SFI manages QMS processes by:

4.1.1.1. Determining the criteria and methods that assure effective operation of, and control over, these processes; and,

4.1.1.2. Assuring availability and appropriate distribution of resources and information to support the operation and monitoring of the QMS; and,

4.1.1.3. Monitoring, measuring and analyzing process results; and,

4.1.1.4. Implementing actions to achieve planned results and to provide for continual QMS and product improvement.

4.1.2. SFI ensures control over any outsourced processes that affect product conformity. Appropriate methods are discussed within the QMS.

4.1.3. When the customer has developed a graded approach for QA criteria, their graded approach will be adopted, as appropriate, by SFI for that contract

4.2. Documentation Requirements: A system of documentation provides the structure for QMS implementation. Appendix B documents a matrix between this Quality Manual and the Level 2 Quality Procedures. Various documents within this system may be in any form or type of media. The depth of detail required is dependent on the complexity and interaction of the particular process and on the competency of the personnel involved in its implementation.

4.2.1. A four-level system is used at SFI:

4.2.1.1. Level 1: Quality Manual: It describes the QMS in terms of overall policy and objectives and also references specific quality procedures.

4.2.1.2. Level 2: Quality Procedures. Where required, these documented procedures describe how major elements of the QMS policy are implemented.

4.2.1.3. Level 3: Work Instructions. These detail methods for completing specific tasks. These documents may be issued at either the systems or operating department levels.

4.2.1.4. Level 4: Forms and Records required to document QMS implementation and provide historic data.

4.2.2. The Quality Manual: This manual is established, controlled, and maintained to state the goals and scope of the QMS; to define and justify any exclusions to the Standard; to provide listings and/or direct references to various QMS documents; and to describe, in broad terms, the sequence and interactions of various QMS processes.

4.2.2.1. If requested, a hard-copy of this Quality Manual (at its most current revision) may be distributed to customers, regulatory bodies and other interested parties. The Company will not maintain these manuals unless contractually required to do so. The Quality Manual shall be considered "UNCONTROLLED" until the title page is marked as a "CONTROLLED COPY", identified, and dated accordingly. After appropriate document control processes have been completed, the Manual is then forwarded to the requestor.

4.2.2.2. In addition to the documents discussed herein, SFI may use additional quality systems specifically applicable to other contractually required quality standards.

4.2.3. Control of Documents: A documented procedure, QP-018, Origination and Control of QMS Documents and Records, provides for document control, identification, legibility, retrieval, and appropriate availability of relevant versions. Methods of archiving or destroying obsolete documents are specified: The approval, review, updates, and re-approval of QMS documents is discussed. Master listings of the current revision status, date of issue, and distribution of all systems documents, including those of external origin, are maintained on the SFI server. All documents maintained on the SFI server are backed up daily and stored in an off-site facility.

4.2.4. Control of Quality Records: Evidence of conformance to the requirements of the Standard and other legal and regulatory documents, and of the effective operation of the QMS, require adequate records. A documented procedure, QP-018, Origination and Control of QMS Documents and Records, details the methods used to identify, store, retrieve, protect, establish retention times for, and dispose of, legible quality records. All records maintained on the SFI server are backed up daily and stored in an off-site facility.

Section 5 – Management Responsibility

5.1. **Management Commitment**: Top management commits to developing, implementing, and continually improving the QMS by establishing the Company's quality policy and objectives, and ensuring the resources necessary to fulfill and measure these objectives. This is done by formal management review of the QMS to monitor progress toward the objectives, and to alter them as business situations/opportunities arise or change. Where appropriate, customer, statutory, and regulatory requirements are made available to Company employees – stressing the importance of meeting these requirements. Regular Monthly Plant wide meetings and situational Team meetings communicate important aspects of our business, customer requirements and team expectations for business and safety goal attainment.

5.2. **Customer Focus**: Methods are provided to proactively determine customer needs and expectations. These needs are converted into internal requirements that achieve customer satisfaction in all areas of the business relationship.

5.3. **Quality Policy:** The SFI Quality Policy is appropriate to SFI's goals, commits company management to customer satisfaction and continuous improvement, and is the background philosophy against which quality objectives are written. Copies are posted in various places throughout the companies facilities. The policy is explained to all employees, and is reviewed, updated, if necessary, during formal QMS Management Reviews.

SFI Quality Policy:

- Through Teamwork and Continuous Improvement, Springs Fabrication is committed to providing High Quality Products to our Customers, On Spec, On Time, Every Time.

5.4. Quality Objectives: Springs Fabrication, Inc. deploys, monitors, and strategically acts upon Key Performance Indicators (KPIs). These KPIs focus our efforts towards meeting customer expectations, improving internal performance, business sustainability, employee engagement and opportunities for professional growth. Corporate-level KPIs include:

- Cost of Quality (Target: <0.5% of revenue)
- On-Time Delivery (Target: > 95%)

5.5. **Planning**:

5.5.1. QMS quality objectives are approved by top management, implement the broad goals of the quality policy, and provide for continual improvement of the QMS. Each quality objective includes the method(s) by which it is measured.

5.5.2. The QMS described in this manual and in subservient documents comprises the SFI overall quality plan. Within these documents, QMS processes, including those objectives required to achieve product requirements, are described. Methods to assure adequate resources and to continually improve the QMS are explained. If specific plans are contractually required on a case-basis, they will refer to the QMS as the Company's basic plan and include additional objectives and enabling information as requested.

5.5.3. Changes made to the QMS are planned, implemented, and controlled to assure the ongoing integrity of the QMS while the change process is being undertaken.

5.6. Responsibility, Authority, and Communication:

5.6.1. Functions, their interrelationships, and their relative authorities are defined and communicated through the Company's Organizational Chart (Approximated in Appendix D, most current Representation maintained in "Orientation for New Employee, Phase 1 and current employee list maintained by HR).

5.6.2. The SFI Management Representative is formally appointed by top management. Irrespective of other responsibilities, this person is responsible for:

5.6.2.1. Ensuring that adequate QMS processes are established, implemented, and maintained; and, Appraising QMS performance and reporting performance, and requirements for improvement, to top management; and,

5.6.2.2. Promoting of the importance of customer relationships and requirements throughout the Company; and,

5.6.2.3. Liaising with outside parties on QMS issues.

5.6.3. As directed by top management, the Management Representative facilitates ongoing communications between various internal levels and functions to enable and enhance QMS processes and to assure system effectiveness.

5.7. Management Review: The QMS is reviewed to ensure ongoing suitability, adequacy, and effectiveness. A documented form, QF-94, Management Review, describes the format and frequency of Management Review meetings. Suggestions for improvements and changes to the QMS, the quality policy, and the quality objectives are considered as a part of this review. Records of management review are permanently retained on the SFI server.

5.7.1. Review Inputs: At a minimum, Management Review includes both current performance and opportunities for improvement of the following:

5.7.1.1. Results of internal, supplier, and customer audits; and,

5.7.1.2. Positive and negative customer feedback; and,

5.7.1.3. Process performance and product conformance; and,

5.7.1.4. Status of preventive and corrective actions; and,

5.7.1.5. Follow-ups on action items from previous reviews; and,

5.7.1.6. Business changes which could affect the QMS; and,

5.7.1.7. Recommendations for improvement to the QMS.

5.7.2. Review Outputs: At a minimum, the Management Review report includes a summary of the results of the review of the inputs, and, where appropriate, provides action items related to:

5.7.2.1. Improvement to the effectiveness of the QMS and QMS processes; and,

5.7.2.2. Results of completion, changes, or additions, to the listing of quality objectives; and,

5.7.2.3. Product improvements related to customer requirements; and,

5.7.2.4. Status of various resource needs.

Section 6 – Resource Management

6.1 General: As required, Springs Fabrication provides appropriate human, infrastructure, and environmental resources to assure customer satisfaction and enable QMS implementation and improvement.

6.2 Human Resources

6.2.1 Personnel competence is based on applicable education, training, skills, and experience. A documented procedure, QP-002, Training Program, describes how training at SFI is evaluated, implemented, monitored, and documented. Appropriate methods evaluate such training and, if necessary, provide for additional training.

6.2.2 Competence, training, and awareness

6.2.2.1 The organization shall evaluate required competencies against the talents of company personnel; and,

6.2.2.2 Where required, provides training to upgrade skill levels; and,

6.2.2.3 Evaluates the results of training efforts.

6.2.3 Records of education, experience, training, skills, and employee qualifications are maintained.

6.2.4 Employees are apprised of their relevance and importance with respect to customer satisfaction and to their contributions regarding achievement of quality objectives.

6.3 Infrastructure and Work Environment:

Buildings, workspaces, and associated facilities, process equipment including both hardware and software, and various supporting services are identified, provided, and adequately maintained to assure conformity of product; further, human and physical factors in the work environment are also identified and managed. The management and review of these issues are discussed during formal Management Reviews (see Paragraph 5.6).

Section 7 – Product Realization

7.1 Planning of Product Realization: When needed to initiate, control, and manufacture customer products – processes, sub-processes, and their logical sequencing are adequately planned and documented and are consistent with other elements of the QMS. A documented procedure, QP-019, Product Planning and Scheduling, describes the processes from quoting to order acceptance to scheduling. SFI determines the following:

7.1.1 Product quality objectives and requirements (e.g., specifications chemical compositions, dimensions); and,

7.1.2 Appropriate processes, documents and resources required to realize the product; and,

7.1.3 Criteria for product acceptance and determination of appropriate verification, validation, monitoring, inspection and test activities required to ensure fulfillment of these criteria; and,

7.1.4 Required records to document that the realization process and the resultant product fulfill product requirements.

7.2 Customer-Related Processes:

7.2.1 Initial customer requirements are identified and reviewed prior to submission of a tender or acceptance of a contract. These include product, delivery, and post-delivery requirements, unspecified product requirements that the Company determines are necessary to fulfill customer intentions or specified usages, and product-related obligations (including statutory and regulatory requirements). Additional requirements that SFI perceives will add value to the final deliverable are also identified and brought to the customer's attention for possible inclusion.

7.2.2 Prior to submission of tender or acceptance of orders in any form, or changes to orders in any form, review of requirements relating to the product ensures that:

7.2.2.1 Product requirements are defined and documented; and,

7.2.2.2 Customer requirements are confirmed before contract acceptance, unless a documented statement of requirements has been received; and,

7.2.2.3 Differences between any tender(s) and the final contract have been resolved; and,

7.2.2.4 SFI has the ability to satisfactorily fulfill the contract.

7.2.2.5 Results of the review process and of any subsequent actions, including changes to the contract, are recorded. When there are no documented requirements given, acceptance of customer requirements shall be confirmed. Amended changes shall be provided to relevant personnel in sufficient detail to enable them to provide product that meets customer expectations.

7.2.3 Adequate lines of communication to the customer are provided to discuss product and business information, including amendments, and customer feedback, including customer complaints. A documented procedure, QP-009, Complaint Investigation, details the steps taken to resolve issues when a complaint is received from a customer.

7.3 Design and Development (D/D): Excluded from ISO. As a contract manufacturer, SFI has no design control.

7.3.1 A documented procedure, QP-012, Design and Drawing Control, describes the processes that ensure SFI is meeting customer requirements regarding designs and drawings. D/D activities are planned and controlled, and include the following:

7.3.1.1 Definition of various stages of the D/D process; and,

7.3.1.2 Review, verification and validation activities appropriate to each stage; and,

7.3.1.3 Appointment of responsibilities and authorities for each stage; and,

7.3.1.4 Management of interfaces between different groups to ensure both effective communications and clarity of responsibilities; and,

7.3.1.5 Provisions for updating planning activities, when appropriate, during the D/D process.

7.3.2 Product requirements comprise D/D inputs and are defined and documented. These requirements include:

7.3.2.1 Functional and performance requirements; and,

7.3.2.2 Applicable statutory and regulatory requirements; and,

7.3.2.3 Appropriate information derived from similar previous designs; and,

7.3.2.4 Other essential D/D elements; and,

7.3.2.5 Review of defined inputs for adequacy, completeness, clarity, and lack of internal conflict.

7.3.3 D/D outputs are documented to enable verification against established inputs. Output documents are not released prior to formal approval. Output requirements include:

7.3.3.1 Fulfillment of input requirements; and,

7.3.3.2 Information for purchasing, production, and service operations; and,

7.3.3.3 Provision of product acceptance criteria; and,

7.3.3.4 Product characteristics essential to safe and proper use.

7.3.4 Reviews are held at point(s) determined during design planning. Attendance at D/D review includes representatives of the functions involved in the relevant review. Reviews evaluate the ability of the design, to that point, to fulfill requirements. Problem areas are identified and follow-up/corrective actions are proposed. D/D reviews and any follow-up activities are recorded.

7.3.5 Verification is a *process-oriented* activity and is performed at points determined during design planning. Verification evaluates the ability of the D/D output to fulfill D/D input requirements, and describes required follow-up/corrective actions if needed. D/D verifications and any follow-up activities are recorded.

7.3.6 Validation is a *product-oriented* activity that confirms that the resulting product meets the requirements for its known intended use or application. Preferably, full validations are performed prior to delivery or implementation. In cases where this is impractical, partial validations are performed to the extent possible. D/D validations and any follow-up activities are recorded.

7.3.7 Changes are identified, documented and controlled, and include evaluations of their effects on component parts and on deliverable products. Appropriate review, verification and validation activities are performed and approved before change implementation. D/D change reviews and any follow-up activities are recorded.

7.4 Purchasing:

7.4.1 Purchasing Process: SFI assures that purchased products and/or services conform to specified requirements. A documented procedure, QP-016, Purchasing, describes the processes and controls used to ensure that SFI meets customer requirements regarding purchased product or services. The type and extent of control SFI exerts over its suppliers depends on the particular process(es) and output(s) in which the supplier's product is used. Suppliers are selected based on their ability to supply conforming product. A documented procedure, QP-020, Supplier Selection, Evaluation, and Re-evaluation, describes the requirements and controls that assure that the suppliers used at SFI will

satisfy customer requirements. Criteria are defined and evaluation results and required actions are recorded for the initial evaluation and selection, and periodic appraisal of suppliers who provide product for use within the QMS or for inclusion in customer deliverables or in production/service processes.

7.4.2 Purchasing Information: Information in purchasing documents is reviewed for adequacy prior to release to suppliers. Where appropriate, documents include the following information:

7.4.2.1 Requirements for approval of product, procedures, processes, equipment, and the qualification of personnel; and,

7.4.2.2 Quality Management System requirements.

7.4.3 Product Verification: A documented procedure, QP-021, Material Receipt, describes the activities required to verify that purchased product conforms to purchase requirements and are identified and implemented. If SFI or our customer(s) intend to verify product at our supplier's premises, the Company specifies verification arrangements and product release methods in the purchasing documents.

7.5 Production and Service Provision: Excluded from ISO. As a contract manufacturer, SFI is not responsible for service activities.

7.5.1 Production and service operations are controlled by information describing product characteristics, appropriate work instructions, use and maintenance of suitable equipment, availability and use of appropriate monitoring and measuring equipment, implementation of monitoring and measurement activities, and the implementation of defined processes for product release, delivery, and, where applicable, post-delivery activities. A documented procedure, QP-023, Production – Standard Practices, describes the expectations of workmanship, procedure, and documentation of production personnel for their respective departments.

7.5.2 Processes whose outputs cannot be subsequently verified must be appropriately validated. A documented procedure, QP-017, Validation of Special Processes, describes the controls implemented for specific recurring processes employed at SFI. Validation requirements include those processes where deficiencies will only become apparent after use of the product or, where applicable, delivery of the service. Validation demonstrates process ability to achieve planned results, and includes:

7.5.2.1 Defined criteria for review and approval of processes; and,

7.5.2.2 Approval of equipment and qualification of personnel; and,

7.5.2.3 Use of defined production and monitoring methods and procedures; and,

7.5.2.4 Revalidations where required; and,

7.5.2.5 Maintenance of adequate records.

7.5.3 Throughout production operations, SFI identifies both the product and its status with respect to monitoring and measurement requirements. Further, where traceability is required or appropriate, the unique identification of the product is controlled and recorded.

7.5.4 If customer property (including intellectual property) is provided to SFI for use in processes or for incorporation into products is identified, verified, protected, safeguarded, and, where appropriate, maintained. Loss, damage, or unsuitability for use is immediately recorded and reported to the customer.

7.5.5 The conformity of both constituent parts and shipped product, including identification, handling, packaging, storage and protection, is preserved throughout internal processes and extending to the contractually stated delivery point. Preservation ensures conformance to both to customer and internal SFI requirements. A documented procedure, QP-022, HSPPD, describes the methods

employed to ensure that customer product is Handled, Stored, Protected, Preserved, and Delivered appropriately to satisfy customer requirements.

7.6 Control of Monitoring and Measuring Equipment: Required product/service measurements are identified, and appropriate monitoring/measuring devices are identified, used and controlled to ensure that measurement capability is consistent with measurement requirements. A documented procedure, QP-004, Calibration of Measuring and Test Equipment, describes the controls employed to ensure that Measuring and Test Equipment is calibrated or verified to international or national standards.

7.6.1 To ensure validation of results, monitoring/measuring equipment are:

7.6.1.1 Calibrated or verified, or both, adjusted periodically or prior to use against equipment traceable to international or national standards. If such standards do not exist, the basis for calibration is recorded; and,

7.6.1.2 Adjusted or re-adjusted as necessary; and,

7.6.1.3 Identified to enable determination of calibration status; and,

7.6.1.4 Safeguarded from adjustments that would invalidate proper calibration; and,

7.6.1.5 Protected from damage and/or deterioration during use, handling, storage, and maintenance.

7.6.2 Records of the results of calibration are maintained.

7.6.3 If a measuring/monitoring device is found out of calibration, the validity of previous inspection/test results are assessed if the requirements of QP-004 Calibration of Measuring and Test Equipment require this action. If required, corrective action regarding any nonconforming product is taken. The equipment shall be removed from service until it is recalibrated. The results of all re-verifications and re-calibrations are recorded.

7.6.4 Software used for monitoring/measuring is validated for adequacy prior to use and reconfirmed as necessary. Information Systems management shall provide maintenance of software.

Section 8 – Measurement, Analysis, and Improvement

8.1 General: Monitoring, measurement, analysis, and improvement activities that ensure product and QMS conformity and drive product and QMS improvements are defined, planned, and implemented. The need for statistical techniques is explored – if such techniques are applicable, they are enacted. The Continuous Improvement Document Flowchart, see Appendix E, discusses the interrelationship of Section 8 activities.

8.2 Monitoring and Measurement:

8.2.1 Customer Satisfaction: Analysis of information concerning customer satisfaction and/or dissatisfaction is a major metric used to measure overall QMS performance with respect to quality goals and objectives. A documented procedure, QP-015, Customer Satisfaction, describes how SFI obtains, analyzes, and uses customer feedback as a continuous improvement tool.

8.2.2 Internal Auditing:

8.2.2.1 Periodic internal audits are conducted to determine if the QMS conforms to the Standard's requirements and if it has been effectively implemented and maintained. A documented procedure, QP-007, Internal Auditing, describes SFI's internal auditing program. This audit system includes the following:

8.2.2.1.1 Planning that considers the status and importance of the processes and areas to be audited, and the results of previous audits; and,

8.2.2.1.2 Criteria, scope, frequency and methods of audit that are defined; and,

8.2.2.1.3 Auditor selection and conduct is monitored to assure objectivity and impartiality of the audit process.

8.2.2.1.4 Auditors do not audit their own processes.

8.2.2.2 This procedure includes responsibilities and requirements for planning and conducting audits to ensure their independence, recording audit results, reporting these results to management, and maintaining appropriate records.

8.2.2.3 Timely corrective action on audit nonconformities and their root causes is taken by the management responsible for the audited area. Implementation of such actions is verified, and the verification results are reported.

8.2.3 Monitoring and Measurement of Process: Ongoing monitoring and/ or measurement of QMS processes is performed to ensure each process continues to fulfill its intended purpose. When planned results are not achieved, corrective actions are taken to ensure product conformity.

8.2.4 Monitoring and Measurement of Product: At appropriate stages of the realization process, various monitoring and/or measuring methods are employed to verify that product requirements are met. A documented procedure, QP-005, Quality Inspections, describes the inspection requirements employed by production and inspection personnel to ensure customer requirements are being met. Records of conformity with acceptance criteria are kept, and indicate the appropriate product release authority. Unless approved by the customer or other relevant authority, no product release or service delivery is accomplished until all monitoring and/or measurement activities are satisfactorily completed.

8.3 Control of Nonconforming Product: A documented procedure, QP-001, Control of Nonconformities, describes methods that ensure that nonconforming product (NCP) is identified and controlled to prevent unintended use or delivery. The controls, responsibilities, and authorities that implement them, are discussed

in this procedure. Should detection occur after use or delivery, appropriate actions are taken to mitigate negative effects or potential effects.

8.3.1 Issues regarding NCP are resolved by one or more of the following:

8.3.1.1 Taking action to eliminate the nonconformity. NCP that is reworked or repaired is re-verified to ensure its conformity. Where contractually required, the methods and extent of rework/ repair is reported to the customer for concession.

8.3.1.2 Authorizing its use, release, or acceptance 'as-is' by either internal or customer concession/deviation.

8.3.1.3 Taking actions to preclude its original intended use or application. NCP that is scrapped is isolated and is physically rendered useless or clearly marked as scrap.

8.3.2 Records concerning the nature of nonconformities, and subsequent actions taken, including concessions, are maintained.

8.4 Analysis of Data: Collection and analysis of appropriate data, including those from monitoring and measurement activities, is accomplished to determine QMS suitability and effectiveness, and to provide the basis for continuing system improvement. Analysis of these data provides information concerning:

8.4.1 Customer satisfaction/dissatisfaction; and,

8.4.2 Conformance to product requirements; and,

8.4.3 Characteristics and trends of processes, product, including identification of possible preventive actions; and,

8.4.4 Supplier performance.

8.5 Improvement:

8.5.1 Continual Improvement: Continual improvement of QMS effectiveness is driven by the quality policy, quality objectives, audit results, analysis of data, corrective and preventive action programs, the management review regimen, and other inputs that may be relevant.

8.5.2 Corrective Action: Corrective actions (CA's) are used to resolve *issues that have occurred.* A documented procedure, QP-010, CA PA, describes the process of managing corrective actions to resolve issues within the QMS. CA is appropriate to the impact of the issues being resolved, and is taken to eliminate the results and the causes of nonconformities in order to prevent their recurrence. Procedures define requirements for:

8.5.2.1 Reviewing nonconformities (including customer complaints); and,

8.5.2.2 Determining the root cause(s) of the nonconformities; and,

8.5.2.3 Evaluating the need for actions necessary to resolve the root causes and prevent re-occurrences.

8.5.2.4 Determining and implementing the required CA; and,

8.5.2.5 Recording the results of the CA taken; and,

8.5.2.6 Reviewing these results for effectiveness.

8.5.3 Preventive Action: Preventive Actions (PA's) are used to resolve *issues that could possibly occur.* A documented procedure, QP-010, CA PA, describes the process of managing preventive actions to resolve issues which may potentially occur within the organization and affect planned results. PA is appropriate to the impact of the issues being explored, and is taken to prevent the results and causes of nonconformities before they occur. Procedures define requirements for:

8.5.3.1 Determining potential problems and their cause(s); and,

8.5.3.2 Evaluating the need to prevent them; and,

8.5.3.3 Determining and implementing appropriate preventive actions; and,

8.5.3.4 Recording the results of the PA taken; and,

8.5.3.5 Reviewing the results for effectiveness

Note: Corrective Actions are also accomplished within our NCR process QF-001. SFI primarily provides highly customized manufacture of small quantity or one-time builds. Traditional CA activities are less appropriate as continued production seldom occurs. We employ an active 5-Why process within our Control of Non-Conformities stimulating CA activities of root cause identification and learned resolutions to be applied to other / similar work activities.

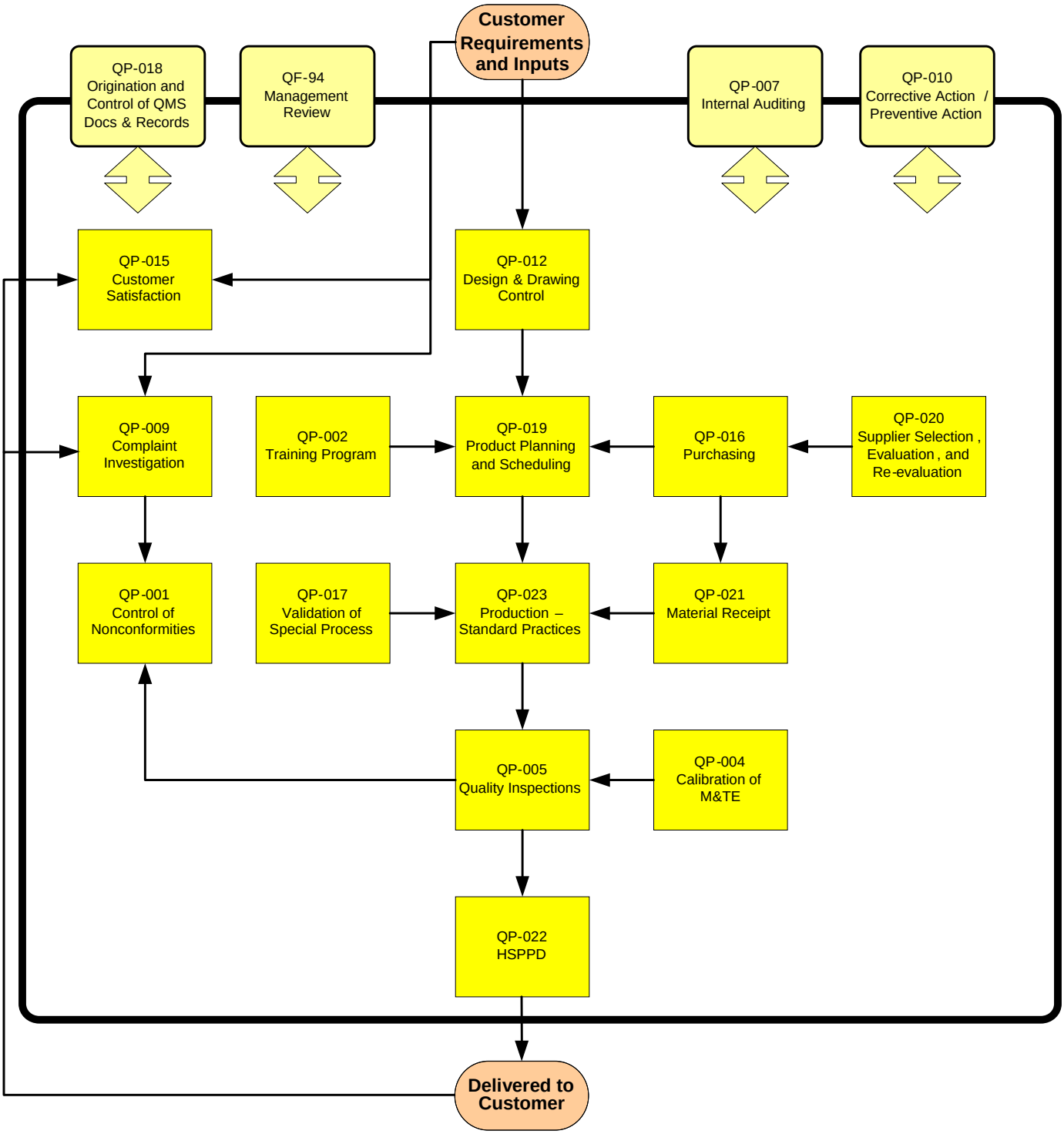
Section 9 – Revision History

REVISION HISTORY

Revision	Date	SCO#	Description of Change
G	6/22/09	915	Revised sections 4.2.1.1, 4.2.1.2, 5.3, 6.2, 7.2.2.5, 7.5.1, 7.6.1, 7.6.3, 7.6..4, 8.5.2.3 & 8.6 to reflect current process
H	6/10/10	1061	– Replaced all references to ISO9001:2000 with ISO9001:2008 – Revised Section 7.6.3 to clarify wording – Removed signature page; use SCO process – Inserted Appendix B Quality Manual Level 1 Procedure Matrix and re-numbered Appendices B (to C), C (to D), and D (to E) – Updated Appendix D Org Chart
I	8/14/13	1315	– Updates to support physical changes made to supporting ISO procedures and work instructions. Also updated company history
J	8/6/14	1373	– Revised SFI Quality Policy to include new speak and Ownership Thinking.
K	10/28/15	1401	– Update Quality Policy Statement & add quality objectives – Remove reference to DOE O 414.1C – Remove reference to ASME “S” stamp – Update org chart
L	10/27/17	1437	– Removed ISO Exceptions 7.5.1 Control of Production & Services and 7.5.2 Validation of Processes for Production and Service – Changed "7.5.3" to "7.3" – Pg 22 - changed "QP-010 Customer Satisfaction" to "QP-015 Customer Satisfaction"

Appendix A

Sequence and Interaction of Processes

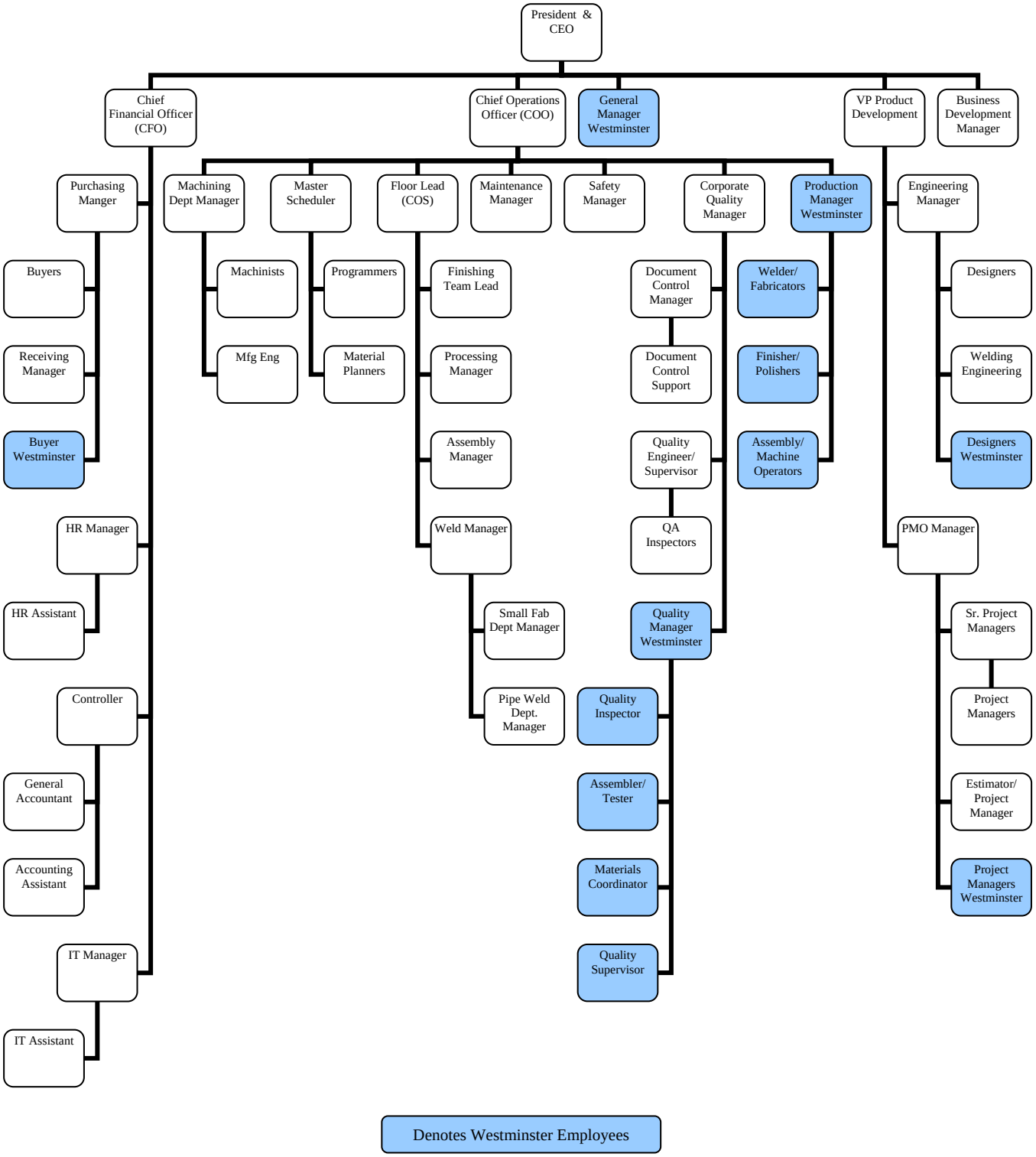


Appendix B

ISO 9001:2008	QT-1 Quality Manual	QP-001 Control of Nonconformities	QP-002 Training Program	QF-94 Management Review	QP-004 Calibration of Measuring and Test Equipment	QP-005 Quality Inspections	QP-007 Internal Auditing	QP-009 Complaint Investigation	QP-010 CA PA	QP-012 Design and Drawing Control	QP-015 Customer Satisfaction	QP-016 Purchasing	QP-017 Validation and Control of Special Processes	QP-018 Origination and Control of QMS Documents and Records	QP-019 Product Planning and Scheduling	QP-020 Supplier Selection Evaluation and Re-evaluation	QP-021 Material Receipt	QP-022 HSPPD	QP-023 Production - Standard Practices
4.1 QMS General Requirements	X																		
4.2 Documentation Requirements										X			X	X	X				
5.1 Management Commitment	X			X															
5.2 Customer Focus				X				X			X				X				
5.3 Quality Policy	X																		
5.4 Planning	X									X									
5.5 Responsibility, Authority, and Communication	X																		
5.6 Management Review				X			X		X		X					X			
6.1 Provision of Resources			X										X						
6.2 Human Resources			X										X						
6.3 Infrastructure	X			X															
6.4 Work Environment	X			X															
7.1 Planning of Product Realization										X			X		X				
7.2 Customer-Related Processes										X			X		X		X	X	X
7.3 Design and Development															X				
7.4 Purchasing												X			X	X	X	X	
7.5 Production and Service Provision													X					X	X
7.6 Control of Monitoring and Measuring Devices					X														
8.1 Measurement Analysis Improvement—General		X				X	X	X	X		X								
8.2 Monitoring and Measurement						X													
8.3 Control of Nonconforming Product		X																	
8.4 Analysis of Data		X		X			X	X	X		X								
8.5 Improvement		X		X			X	X	X		X								

Appendix C

Organizational Chart



Appendix D

Continual Improvement Flowchart