Wellbore Integrity SOLUTIONS

Quality Manual

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Document Control

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Revision History

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E	D. Brantley	October 16, 2023	Updated Section 9.3.1	D. Brantley
F	D. Brantley	March 13, 2024	Updated section 4.4	D. Brantley
G	Chris Glass	August 6, 2024	Update for API Q1 10th addition compliance.	C. Glass
H	Chris Glass	Sept. 27, 2024	Created a new PDF file for read only users.	C. Glass
J	Mark Huft	Oct. 28, 2024	Added ISO Amendment 1, 2/2024 Climate Action Changes in section 4.	C. Glass
K	Chris Glass	February 21, 2025	Added Management Review Form	C. Glass
L	Suresh Narayanasamy	May 05, 2025	Removed Heat treatment in 4.4	Dan Bergerson
M	Mark Huft	June 5, 2025	Clarified climate requirements for ISO compliance.	Dan Bergerson
N	Suresh Narayanasamy	July 16, 2025	Added Key personnel are identified by title. Employees with managers in their title are considered Key personnel under section 4.4	Dan Bergerson

Note: The revision-controlled source of this document is stored in the Document Management System; a paper version of this document is uncontrolled and should be compared by the user with the latest released source document to ensure it is up-to-date.

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1 Scope

This manual applies to the Engineering and Manufacturing (E&M) Center and, once issued, replaces all previous documents of a similar name and, in case of conflict, takes precedence over all subsidiary documents and manuals.

In order to achieve full conformance with the Wellbore Integrity Solutions (WIS) QHSE Policy, the Engineering and Manufacturing Center has implemented a formal, documented Quality Management System (QMS) consistent with the requirements of ISO 9001:2015 and API Q110th edition which supports our 7-1 & 7-2 licenses. The scope of the QMS covers all activities related to product development, delivery and post-delivery processes for the design and manufacture of surface and wellbore equipment for the drilling, exploration, and production industry.

All employees are required to be familiar with the QHSE Policy and to follow QMS procedures, including all supporting local procedures that are relevant to their work.

2 Normative References

The following reference documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies:

- ISO 9000:2015 Quality Management System- Fundamentals and vocabulary ISO 9001:2015, Quality management systems- Requirements
- API Specification Q1 10th Edition, specifications for Quality Management System Requirements for Manufacturing Organizations for the Petroleum and Natural Gas Industry

3 Terms and Definitions

For the purposes of this document, the terms and definitions given in ISO 9000:2015 and API specification Q1 10th edition, 7-1 & 7-2 license current revisions apply.

Note that throughout the document the word, products, and services are used interchangeably. Product realization is defined as a product or service produced by E&M.

4 Context of the Organization

4.1 Understanding the organization and its context

Wellbore Integrity Solutions' QHSE Policy, standards and objectives along with the E&M Quality Management System provide the context in which E&M operates.

External and internal issues that affect customer satisfaction and quality of delivered products and services, as applicable, are monitored and reviewed during Management Reviews as per section 9.3 and used to as inputs for the reviews. Examples of external issues include supplier quality and product reliability while internal issues include manufacturing non-conformances

4.2 Understanding the needs and expectations of interested parties

The E&M Center monitors and reviews the interested parties and their requirements that are relevant to the QMS.

The interested parties are suppliers, employees, and customers.

Requirements from these interested parties are managed through QMS activities including, but not limited to, purchase orders and in-coming inspection, regular employee meetings, customer feedback through surveys and field sales communication.

4.3 Determining the scope of the Quality Management System

The scope of the E&M Quality Management System covers all activities related to design, manufacture and support of product and services for oil & gas Industry, as applicable.

The Center shall document the scope of its quality management system within the framework of E&M Quality Management System. The Center shall document justification for any E&M QMS requirement that is determined to not be applicable to the scope of its QMS.

4.4 Quality management system and its processes

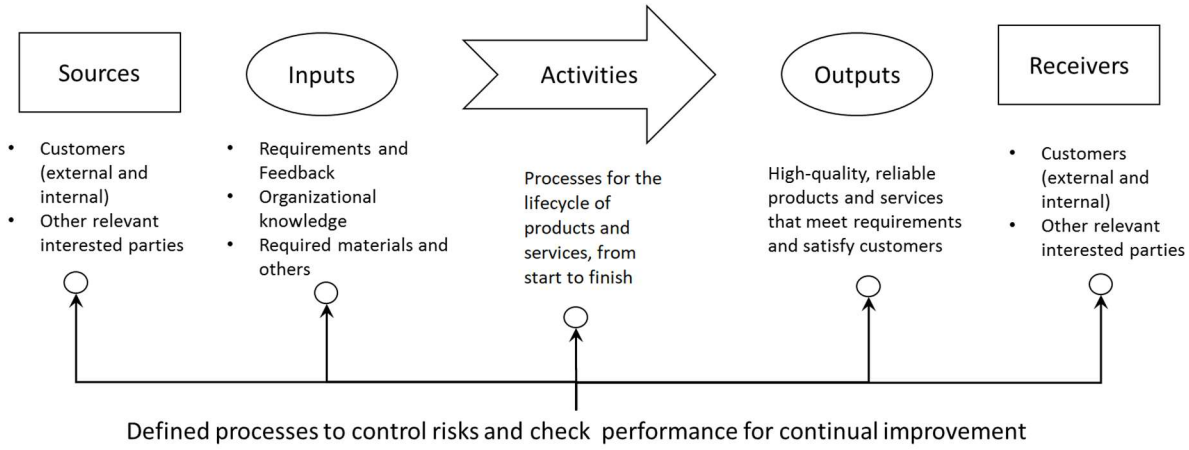
This quality manual documents the QMS, and it is supported by standards and policies that are accessible through the Document Management System (DMS). Figure 1 provides a schematic representation on key elements and how checkpoints allow them to control risks and evaluate performance for continuous improvements. Figure 2 illustrates how this quality manual is set up and how sections 4 to 10 can be grouped in relation to the plan-do-check-act cycle.

Consideration has been given to the following activities in planning the QMS:

- The preparation of standards, procedures, supporting documentation and plans as required to implement the quality management system, ensuring each documented process properly captures the inputs and outputs through appropriate activity diagrams, as applicable
- The responsibilities and authorities for these processes as described in the responsibilities section of each procedure
- The identification of controls, processes, equipment, resources, and skills needed to achieve the required quality
- Ensuring the compatibility of the design, processes, servicing, inspection, test procedures and documentation
- The updating of inspection and testing techniques including development of new instrumentation
- The identification of measurement requirements
- The identification of verification at appropriate stages of design and manufacture
- The clarification of standards of acceptability for all features and requirements, including those which contain a subjective element
- The identification and preparation of quality records
- Adherence to relevant statutory and regulatory requirements
- Maintain responsibility for product conformance to specified requirements when processes are outsourced

- Managing risks and opportunities
- Managing change and continual improvement
- Business continuity, emergency preparedness and response
- Exclusions – Externally Owned Property
- Key personnel are identified by title. Employees with managers in their title are considered Key personnel.

FIGURE 1: KEY ELEMENTS IN THE PROCESS



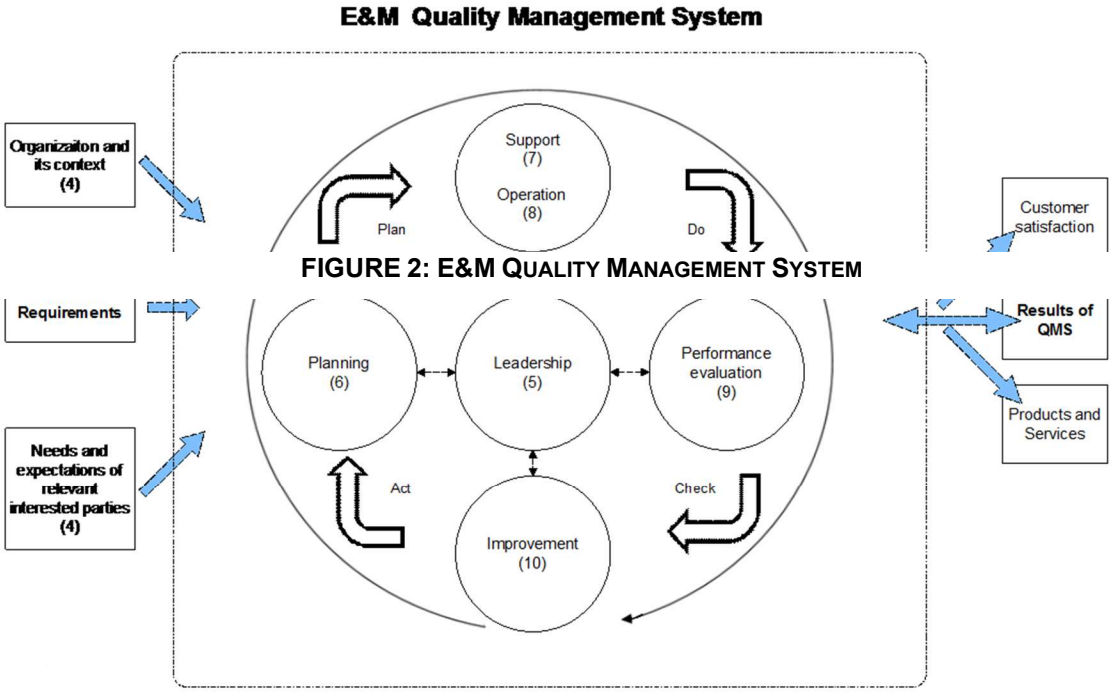


FIGURE 2: E&M QUALITY MANAGEMENT SYSTEM

This quality manual shall be maintained and controlled in GEMS and communicated to the organization as needed.

A list of procedures that control the E&M center's QMS are listed in the E&M center Quality Documentation Index; DTRMFG-PR-QU-10001.

The following E&M center processes require validation.

- Welding
- Wet fluorescent mag

5 Leadership

5.1 Leadership and commitment

5.1.1 General

Management commitment is evident in the WIS QHSE Policy, quality objectives and this quality manual. The records from planned management reviews as per Section 9.3.3 demonstrate continual commitment. The availability of resources is defined in section 7.1.2 of this manual. Risk-based thinking is implemented throughout the product lifecycle using tools such as Failure Modes and Effects Analysis for risk identification, as applicable. Improvements to the quality management system are promoted and reviewed during Management Reviews.

Center management ensures support for line management to lead and take ownership of strategic efforts in their areas of responsibility.

5.1.2 Customer focus

Customer focus is inherent in the QMS, which ensures that customer's requirements and applicable statutory and regulatory requirements are well determined, fully traceable and achieved, both for product development and product delivery as described in section 4.2. Customer focus is maintained throughout the lifecycle of the product including post-delivery activities as described in section 8.5.5.

5.2 QHSE (Quality, Health, Safety and Environmental) policy

5.2.1 Establishing the quality policy

E&M is committed to the implementation and continuous improvement of processes as defined in the WIS QHSE Policy.

Communicating the quality policy

WIS QHSE Policy is post for employee awareness.

5.3 Organizational roles, responsibilities, and authorities

Management Representative for the E&M Center has been appointed by top management and has authority and responsibility to plan, implement, and maintain the center QMS.

The Quality Assurance Manager is the appointed Management Representative. He/she has direct access to management and the organizational freedom to ensure that all aspects of operations are in compliance with the QMS and has authority for reporting on the performance of the QMS for review, and continual improvement. He/she ensures that actions are initiated to minimize the likelihood of the occurrence of nonconformities.

The Quality Assurance Manager shall ensure awareness of customer requirements are promoted throughout the Center.

- Ensure that the QMS conforms to the requirements of API Q1, ISO 9001 current revisions.
- Ensuring that processes needed for the QMS are established, implemented, and maintained.
- Reporting to top management on the performance of the QMS and any need for improvement
- Ensuring initiation of actions to address nonconformities
- Ensuring the promotion of awareness of customer requirements throughout WIS.

Personnel working in the center are bound by the requirements of this quality manual. Management Representative is responsible for ensuring the continual effectiveness of the system, continual improvement of the QMS, and for the Center's ability to produce conforming products consistently and effectively.

Roles and responsibilities are further described in job descriptions available from the HR Department.

Functional managers may delegate the performance of their duties to personnel who report to them; however, the responsibility cannot be delegated. Functional managers may perform the duties of their personnel provided they are qualified to do so. In the absence of a manager, the manager can delegate activities to suitably qualified, competent people; such delegation can be via any media.

6 Planning

6.1 Actions to address risks and opportunities

Consideration shall be given to the internal and external issues determined in section 4.1 and the requirements of relevant interested parties determined in section 4.2 when identifying the actions to address risks and opportunities identified by the organization. Opportunities and risks are addressed throughout the lifecycle of the products and services developed and delivered by E&M.

6.2 Quality objectives and planning to achieve them

Quality objectives, including those needed to meet product and customer requirements, are approved by top management and posted for employee awareness. The quality objectives are measurable, communicated, and consistent with the QHSE policy.

6.3 Planning of changes

Any changes to the QMS, if required, are planned, and executed through the management of change. The management of change process identifies and implements the key steps to be taken to ensure that changes are managed appropriately and in compliance with the quality management system. This applies to all changes within the processes and procedures that impact on the conditions of the quality management system.

7 Resource Management and System Governance

7.1 Resources

7.1.1 General

E&M management will identify resource requirements and provide adequate resources, including trained personnel, to implement and maintain the Quality Management System, enhance customer satisfaction by meeting customer requirements, and for performance of work and verification activities including internal quality audits to ensure the proper functioning and continual improvement of the QMS and its effectiveness.

7.1.2 People

E&M management will identify resource requirements and provide adequate resources, including trained personnel, to implement and maintain the quality management system, enhance customer satisfaction by meeting customer requirements, and for performance of work and verification activities including internal quality audits to ensure the proper functioning and continual improvement of the QMS and its effectiveness.

7.1.3 Infrastructure

Where specialized facilities are required to support QMS activities, they are defined and planned during the budgeting process and/or management review meetings. The site, facilities, site utilities and processing equipment will be installed and maintained by dedicated personnel in the center.

The center shall have emergency preparedness and response plans. Center emergency preparedness, response and business continuity plans are maintained and regularly reviewed.

7.1.4 Environment/Climate for the Operation of Processes

WIS management and maintenance have determined whether climate change is not a relevant issue based on 50+ years of experience at this location, adequate infrastructure to produce quality products and services with regular maintenance / inspections as required. In addition, we have no relevant interested parties providing us any requirements related to climate change.

The following factors are considered: temperature, humidity, electrical conductivity, vibration, air quality, lighting, PPE, ergonomics, etc. Additionally, these factors are regularly assessed and documented where necessary by the HSE departments.

7.1.5 Monitoring and measuring resources

7.1.5.1 General

Centers maintain documented procedures and other documents to control, calibrate and maintain inspection, measuring and test equipment used to demonstrate conformance of standard product to specified requirements as required by the applicable Quality Control Plan(s). All measuring and test equipment are registered and calibrated to demonstrate their capability to measure or test a component, assembly or standard product to a specified standard or performance requirement.

Verification that the inspection, measuring or test equipment is functionally adequate is made available to a customer if requested. Where necessary to ensure valid results, measuring equipment shall be:

- Calibrated or verified at specified intervals, or prior to use, against measurement standards traceable to international or national measurement standards. Where no such standards exist, the basis used for calibration or verification shall be recorded
- Adjusted or re-adjusted as necessary
- Identified to enable the calibration status to be determined
- Safeguarded from adjustments that would invalidate the measurement result
- Protected from damage and deterioration during handling, maintenance, and storage.

When used in the monitoring and measurement of specified requirements, the ability of computer software to satisfy the intended application shall be confirmed prior to initial use and reconfirmed as necessary.

Calibration records shall be maintained and shall include:

- Equipment identification;
- Measurement standard against which the equipment is calibrated;
- Any out-of-specification readings as received for calibration;
- An assessment of the impact of out-of-specification condition; and
- Notification to the customer if suspect product or material has been shipped.

7.1.5.2 Measurement traceability

Each type of inspection, measuring and test equipment used for standard product acceptance is assessed to ensure it is capable of verifying acceptance criteria, and to establish calibration requirements and frequencies. Calibration methods and procedures are documented and detail device type, unique identification, location, frequency of checks, check method and acceptance criteria. For inspection, measuring and test equipment used for product development and design changes, an assessment will be performed to determine if the equipment is capable of verifying acceptance criteria, and to establish calibration requirements and frequencies.

No personal-owned equipment shall be used for standard product acceptance.

To ensure maintenance of calibration schedules a record keeping system for inspection, measuring and test equipment is established and maintained. A record is set up and maintained for each calibrated item. Records will indicate the equipment serial number, calibration accuracy, type of measuring or test equipment, calibration master, calibration frequency, as found condition, calibrated by and date.

The handling and storage of inspection, measuring and testing equipment is such that the accuracy and fitness for use are maintained and equipment is safeguarded from adjustments, which would invalidate the calibration setting.

Whenever inspection, measuring and test equipment is found to be out of calibration, items known to have been measured with that equipment will be reviewed for the validity of measurement during the out of calibration period by taking appropriate actions to assess the impact of the out of specification readings or test results.

7.1.6 Organizational knowledge

QMS documents capture the knowledge necessary for the operation of the organization processes. Project documents and product files capture the knowledge necessary to achieve conformity of products and services.

Re-use of organizational knowledge is critical input to improving both the products and the development process.

Organizational knowledge is maintained and available in DMS (e.g., GEMS), SharePoint and www.wellboreintegrity.com.

Changes in trends and external knowledge are captured and accessed from internal and external sources such as intellectual property, lessons learned, customer interaction and/or external providers.

7.2 Competence

Employee competence is determined and evaluated for effectiveness in job performance. Competence is an explicit, defined requirement or in the case of an experienced hire, a combination of education, training, skill, understanding or demonstrated familiarity.

Ongoing developmental training needs are recorded annually through an annual review process. Additional training may be organized throughout the year as the need arises.

7.3 Awareness

Various methods of creating awareness of the WIS QHSE Policy, the relevant quality objectives and how specific E&M personnel contributions impact the effectiveness of the QMS, including benefits of improved performance and implications of not conforming are employed within the Center. Town Hall meetings, face-to-face interactions, emails, noticeboards are some methods used within the organization to create awareness.

7.4 Communication

Each Center shall determine the internal and external communications relevant to the QMS and plan and execute the communication as needed.

7.5 Documented Information

7.5.1 General

Standards, procedures, and supporting documentation are established and maintained to control documents and data that relate to the QMS. These include documents of external origin such as standards.

7.5.2 Creating and updating

The creating and updating of QMS process documentation is regulated by the document control procedure.

7.5.3 Control of documented information

The control of documents describing the products produced by E&M, as well as the processes used to produce them, is regulated by the document control. This includes the control of external documents used to describe the E&M products (e.g. supplier data sheets in the Engineering product file), and the control of customer owned documents used to drive the design of the E&M products (e.g. customer requirement documents in the sustaining product file).

The quality records procedure defines the means of record identification, collection, indexing, access, filing, storage, maintenance, disposition, and retention.

Records shall be identifiable, legible, and retrievable, and protected from damage, deterioration and protected against security loss. Responsibility for records collection and maintenance shall be established. Records may be stored in any media format.

8 Operation

8.1 Operational planning and control

The planning of the product lifecycle is defined in the QMS standards and the supporting procedures. The records needed to provide evidence that the development processes and resulting product meet requirements and shall be maintained in accordance with requirements given in section 7.5.3.

The control of documents, as well as the processes used to produce them, is regulated by the product file procedure.

Consequences of unintended changes are reviewed within E&M and Segment, as applicable and actions taken to mitigate any adverse effects are established, as necessary.

8.2 Requirements for products and services

8.2.1 Customer communication

Communication with customers regarding performance and complaints is performed by the appropriate supply chain department. Communication with customers regarding concessions is performed as described in section 8.7.

Product information is managed and published by the center or product group management through sales catalogs or other technical publications.

8.2.2 Determining the requirements for products and services

Requirements for a new product or service are defined by the Project Manager and the Business Sponsor. Requirements for a commercial product and the management are defined during the contract review.

8.2.3 Review of the requirements for products and services

The reviews of requirements are performed by the appropriate supply chain departments. Regulatory and statutory requirements are reviewed and noted if applicable.

The relevant department will establish and maintain additional documents for contract review and for the co-ordination of these activities as needed.

8.2.4 Changes to requirements for products and services

When product or services requirements are changed, the relevant documents are amended as needed. Relevant personnel are made aware of the changes as per section 7.4.

8.3 Design of products and services

8.3.1 General

E&M commitment to establishing processes that are appropriate for the design of its products and services is evident within the QMS.

The following sections describe how the design and development processes are established, implemented, and maintained within the Center.

8.3.2 Design planning

Design planning and design control are supervised by the relevant department where the design specifications are controlled. Designs are stored as drawings, specifications, and design documentation.

Documented methods are defined for the design of products. If design or development is outsourced, the same controls are applied as for in-house work including objective evidence that the requirements have been met. Design documentation includes the methods, assumptions, formulas, and calculations. Design and development planning will be documented, and the plan updated as required.

8.3.3 Design inputs

Design inputs are determined, documented and reviewed, including customer, statutory and regulatory requirements together with the results of any pertinent contract review activities. Design inputs include, as necessary, functional and performance requirements, information derived from previous similar designs, and other information essential for design and development.

8.3.4 Design controls

8.3.4.1 Design review

Design reviews will be documented and conducted by qualified personnel and supplemented by others who can take an objective view.

The design review shall include representatives of functions concerned with the design and development stages being reviewed and shall address the ability of the results of design and development to meet requirements. Problems shall be identified, and necessary actions proposed. Records of the review and any actions arising from the review shall be maintained.

As a minimum there shall be a final design review and approval of the final design shall be by individuals other than those who developed the design.

8.3.4.2 Design verification

Design verification will be performed according to the product design and development plan from as per section 8.3.2 to ensure the design stage output meets the design stage input requirements. Verification may be by calculation, comparison with proven designs, tests, demonstrations, or review of design stage documents before release. Records of verification will be documented.

8.3.4.3 Design validation

Design validation follows successful verification and ensures that the new product conforms to the predetermined requirements defined in 8.2.2. Validation is completed prior to the delivery or implementation of the product.

Validation of modifications to components, sub-assemblies or software will be assessed by Engineering or Sustaining and may be validated by analytical means or appropriate testing. Assessment of new manufacturing or finished product testing techniques may be conducted in parallel with existing techniques. Design validation for products and projects are documented, and records maintained.

8.3.5 Design outputs

All design outputs are documented in the form of drawings, specifications and design documents which are verified by a design engineer against the design input criteria and objectives. Drawings and specifications will include component or assembly acceptance criteria and procedures as applicable.

Design outputs will identify characteristics which are critical to the safe and proper functioning of the product, provide adequate information for purchasing, production, shipping, service provision, operation, and preservation of product and will be subject to review before release.

8.3.6 Design changes

Changes to designs are managed through the development of the design. All affected drawings, procedures and specifications are amended in accordance with the amendments defined in this procedure. Design and development changes, including changes to design documents, require the same controls as the original design and development, and design documentation. Changes are reviewed, verified, and validated, as appropriate, and approved before implementation.

The review of design and development changes includes evaluation of the effect of the changes on constituent parts and product already delivered. All product design document changes are identified, documented, and archived in the DMS.

8.4 Control of externally provided processes, products, and services

8.4.1 General

Procurement and sourcing activities are reflected in the overall QMS along with any associated procedures, as applicable.

8.4.2 Type and extent of control

Purchasing is conducted under a controlled system to ensure that purchased materials, items and services supplied to the center for incorporation into the product or sold directly to the field conform to specified requirements.

Approved suppliers are identified on the Approved Suppliers List. All updates, additions, and deletions to this list are made by the Supply Chain team.

The criteria for selection, evaluation and re-evaluation of suppliers are risk based as outlined in the applicable procedure.

Supplier's performance is reviewed through a risk-based evaluation. This evaluation shall be performed at least annually by Supply Chain. Suppliers will be evaluated and documented on a periodic basis for which acceptable performance levels are established.

New suppliers will be qualified for approval by audit and/or first article inspection. New parts from current suppliers will be subject to first article inspection. The Supply Chain group will manage subsequent supplier verification.

Due to the impact of subcontracted work on final product quality, suppliers may be removed from the Approved Supplier List as deemed appropriate.

When a special process is outsourced WIS shall require that the supplier complies with the same controls as for in-housework.

8.4.3 Information for external providers

Purchase Orders will clearly state the requirements for purchased materials, parts, or services, which affect product quality.

Procurement activities at the product centers are governed by the applicable procedure.

Verification of purchased product is carried out before transfer of goods into stores for use. There are documented methods for the verification of purchased products and records are maintained of verification results. Products determined to be unverified will be transferred to a pertinent designated area.

8.5 Production and service provisions

The overall control of production and service provisions is managed by the Quality Control Plan. This procedure calls out steps to control the various production phases.

8.5.1 Control of production and service provisions

Information that describes the characteristics of the product is defined in the Engineering product file.

The manufacturing process is governed by applicable manufacturing and product procedures. The quality plan requirements are described in the Quality Control Plan(s), ensuring that the manufacturing process is performed under controlled conditions.

The manufacturing process includes the use of suitable equipment, working environment and customer's inspection hold or witness points if required.

Process controls are documented in routings or method sheets and includes requirements for verifying compliance with quality plans, drawings, specifications and standards.

The center shall validate any process for production and service provision where the resulting output cannot be verified by subsequent monitoring or where deficiencies only become apparent after the product is in use or the service has been delivered.

8.5.2 Identification and traceability

The QMS outlines a traceability strategy for implementing part/product traceability and the implementation of traceability requirements.

The identification and traceability of component part status through manufacture will be achieved by the use of asset serial numbers, part numbers and/or work orders as defined in the manufacturing processes and managed in the Quality Control Plan(s).

Any product or component losing applicable traceability requirements will be processed as nonconforming in accordance with Section 8.7.

8.5.3 Property belonging to customers or external providers

The center shall document methods for the verification, storage, maintenance, and control of customer property. The Center shall identify, verify and protect customer property provided for use or incorporation into the product or for repair. Customer property may include intellectual property or personal data. If customer property is lost, damaged or otherwise found to be unsuitable this shall be reported to the customer and records maintained.

8.5.4 Preservation

Procedures for handling, storage, packaging, preservation and delivery of product are referred to in the assembly and test procedures. The components or product will be handled in a manner which will prevent damage or deterioration and stored in designated stores areas. Product will be checked for deterioration at specified intervals as defined in the product file procedures.

Protection and packaging will be applied where necessary after final inspection and test. Protection will be extended to include delivery to the customer.

8.5.5 Post-delivery activities

Consideration of post-delivery activities is made during product development via the below:

- Customer requirements are captured for product maintenance, maintenance cost, and reliability.
- HSE and regulatory compliance is defined to requirements and consideration given for unintended consequences of product usage and disposal.
- Reliability activities are performed to achieve and maintain the product's reliability requirements.
- Maintainability activities are performed to define, achieve, and later improve the product's maintainability requirements.
- Manufacturability activities are performed throughout the project to optimize the fit between the product designs, supply chain and manufacturing capabilities in order to increase customer satisfaction, minimize total costs, and maximize flexibility.
- Usability activities are performed throughout the project to ensure the product's usability.
- Requirements are developed for product operation and maintenance manuals.

After delivery to the customer, the following shall be implemented:

- Provide a framework for securing and maximizing the business value of the product, from the first deployment during field testing, through maturity, and until obsolescence, with a constant focus on Field Operations satisfaction.
- Define the requirements for capturing product performance indicators and customer feedback to support continual improvement and lifecycle management.
- Provide product support activities.
- Requirements for reporting and responding to product non-conformities at customer sites.
- Requirements for product returns to the center of manufacture for repair, exchange, or credit.

8.5.6 Control of changes

Changes to designs after the product or service has been delivered to the customer are managed through the engineering lifecycle.

All affected drawings, procedures and specifications are amended in accordance with the clauses defined in this procedure. Design and development changes, including changes to design documents, require the same controls as the original design and development, and design documentation. Changes are reviewed, verified, and validated, as appropriate, and approved before implementation.

The review of products and services changes includes evaluation of the effect of the changes on constituent parts. All product design document changes are identified, documented, and archived in the DMS.

8.6 Release of products and services

Verification of purchased product and service is carried out before the transfer of goods into stores for use. There are documented methods for the verification of purchased products and records are maintained of verification results. Products determined to be unverified will be transferred to a designated area. This process and the in-process inspection and testing activities are controlled according to the Quality Control Procedure.

The center maintains documented inspection and testing procedures to verify that specified product requirements are met. Documented procedures contain the criteria and detail the required recording, inspection, and testing. Evidence of conformity with the acceptance criteria is maintained. Records indicate the person authorizing release of product. There shall be evidence that product release and service delivery shall not proceed until the planned arrangements have been satisfactorily completed unless authorized by a relevant authority and, where applicable, by the customer.

Non-conformances are processed in accordance with Section 8.7.

All records will be held in the appropriate business system.

8.7 Control of nonconforming outputs

Nonconforming items are identified as such, segregated to prevent inadvertent use, and evaluated. Concerned functions will be notified and shall address/disposition both manufacturing acceptance criteria and design acceptance criteria type non-conformances.

Non conformances can be dispositioned as rework, repair, return to vendor, scrap, or use-as-is, with the policy of minimizing the use of use-as-is. The incidence of use-as-is will be monitored by the manufacturing function.

The use of nonconforming product will be under concession signed by the relevant authorities. Where required by a contract, the use of product which does not conform to specified requirements will be reported for concession to the customer or customer’s representative.

Repaired or reworked items will be re-inspected in accordance with acceptance criteria given by Engineering, Sustaining and/or the customer.

Customers shall be notified in the event that delivered product does not conform to the design acceptance criteria. Records of such notifications shall be maintained.

Requirements for documenting and reporting incidents of field nonconformities or product failures that includes requirements for analysis and determination of cause when the product or supporting evidence is available.

9 Performance Evaluation

9.1 Monitoring, Measurement, Data Analysis, and Evaluation

9.1.1 General

QMS conformity and continual improvement of the effectiveness of the QMS are inherent in the quality objectives and management review records. Quality objectives are quantifiable and are time lined or based on statistical data.

9.1.2 Customer satisfaction

Customer satisfaction will be recorded from sources of customer satisfaction information including but not limited to, field feedback meetings, field visits, e-mail, commissioning, or any other mechanisms.

9.1.3 Analysis and evaluation

Quantitative statistical data is compiled explicitly with respect to quality objectives. Statistical data is analyzed to determine improvements associated with quality objectives.

Results of analysis of data are communicated as per paragraph 7.4 Communication.

9.1.4 Rights of access

Representatives of third-party auditing firms involved in certification audits are granted the right of access to the premises of the center facilities for the purpose of auditing. Such audits are coordinated by the quality function.

Customers or their designated representatives are allowed reasonable access to the premises of the center facilities for audits or inspections, as requested and contractually agreed.

All customers and representatives world-wide, given rights of access to the premises of the center, must comply with local Quality & HSE requirements.

9.2 Internal audit

The objective of quality management system audit is to define how elements of the organization will demonstrate the effectiveness, implementation of and compliance to the audit criteria, described through policy, standards and procedures.

Responsibilities and requirements for planning and conducting audits, reporting results, defining remedial action items and maintaining records will be defined.

Objectives are tracked and reviewed periodically. When necessary, corrective actions will be taken in order to meet the objectives and ensure planned results are achieved.

9.3 Management review

9.3.1 General

The Quality Assurance Manager has overall responsibility for ascertaining the suitability, adequacy, effectiveness and alignment of the QMS with the strategic direction of the Center through Management Reviews.

He/she shall ensure the QMS' continuing suitability and effectiveness in satisfying the quality policy and objectives at the Center. The QMS will be reviewed at least once every 12 months; records of reviews will be documented and maintained.

9.3.2 Management review input

The Management Review shall include inputs identified in the management review form (DTRMFG-PR-QU-F001).

Note: *If the center chooses to have several management reviews in one year, each required input must be included in at least one of these meetings.*

9.3.3 Management review outputs

The record of the review shall be documented on the management review form, or equivalent, and distributed to attendees and other personnel as deemed necessary by the Quality Assurance Manager.

Output shall include action points and decisions taken, and where applicable, decisions not to take an action. Additional information presented at the management review can be attached. The minutes will include decisions made and action items related to improving the effectiveness of the QMS, objectives and its processes, improvements of products related to customer requirements and the resource needs to effect the changes.

10 Improvement

10.1 General

As opportunities are determined, management will set objectives for each calendar year to monitor and measure management system process performance. It is the responsibility the Center to take the necessary actions in order to meet the defined objectives.

10.2 Nonconformity and corrective action

The Non-Conformance Procedure describes in detail the requirements for control of nonconforming product.

10.2.1 Corrective Action

Sources of information for corrective action will be activities which affect standard, product, service, quality, concessions, records, audit results, customer complaints and field reports. Corrective action may also be as a result of observations made by personnel carrying out their daily duties.

All customer complaints, manufacturing failures, field failures, nonconformance to procedure and defective purchased items are reviewed by manufacturing.

The Line manager of the affected area is responsible for taking suitable corrective action(s) to eliminate the cause and prevent recurrence using the appropriate media. Corrective actions are documented in the appropriate media and are appropriate to the effects of the nonconformities encountered.

Management shall ensure that corrective actions applicable to the risks and opportunities determined during Management Reviews and any changes to the QMS are properly captured and implemented where necessary. Management shall ensure corrective action is effective in correcting the problem and in preventing recurrence and identify response times for submission of an action plan to address corrective action.

Requirements for documenting and reporting incidents of field nonconformities or product failures that includes requirements for analysis and determination of cause when the product or supporting evidence is available.

10.3 Continual improvement

WIS shall continually improve the effectiveness of the QMS through the use of the QHSE Policy, quality objectives, audit results, analysis of data, corrective actions and management review. The Continual Improvement Procedure captures the requirements and processes for establishing and implementing continual improvement activities at the product centers.