



VerTechs Enterprises, Inc.  
10051 Old Grove Rd.  
San Diego, CA 92131

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Revision NC

# QUALITY MANUAL

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Note: Paragraph with numbers in parentheses is reference to the AS9100 Standard, i.e. (8.2.4.2) refers to First Article, Pg. 35 AS9100.



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## REVISION RECORD

June 18, 2007, Rev NC

Original Issue



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Title page and company approvals

Revision Record

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## QUALITY POLICY STATEMENT (Ref. 5.3)

It is the policy of VerTechs Enterprises, Inc., to meet or exceed our customers' expectations in providing the best quality products in the aerospace industry.

All our efforts are in full compliance with the AS 9100:2004 and ISO 9001:2000 quality management systems and aerospace standards and are supported by a highly trained and skilled workforce.

Our employees contribute actively to our process to meet customer requirements, increasing customer satisfaction, and continual improvement of products. We pledge to maintain a safe and environmentally friendly workplace as a responsible member of our industry and our community.

VerTechs Enterprises, Inc. top managers are committed to this process. Our managers and owners are also committed to meeting our responsibility to continually improve the effectiveness of the Quality Management System.

This policy has been formulated by the President and executive management staff of VerTechs Enterprises, Inc. The policy is explained and discussed at the general orientation training given to all existing and new employees. The policy is also posted in conspicuous locations throughout the company.



# QUALITY MANUAL

## 1.0 INTRODUCTION

This quality manual describes the Quality Management System at VerTechs Enterprises, Inc. VerTechs Enterprises, Inc. manufactures high quality aerospace products, and focuses on production, inspection and testing practices that are of high quality and added value that enhance our customers' ability to effectively manage their present and future requirements. VerTechs Enterprises, Inc. is committed to the highest level of customer satisfaction and to long-term continual improvement of its quality management system and related processes.

### PURPOSE

This quality manual provides a guideline for activities related to customer and supplier product quality. This manual is issued and controlled by the VTE Management Representative, Quality Manager of VerTechs Enterprises, Inc. Each section is supported by operation procedure manuals (OPM's) which are referenced within each appropriate section. The Management Representative coordinates' periodic reviews and revisions to the quality manual and operation procedure manuals. The OPM review is to ensure that these documents reflect the latest revision of the standard and associated documents as well as continuous improvement of current practices and procedures. Revisions are made to the OPM's when needed.

## 2.0 REFERENCES

AS 9100:2004	Quality Management Systems – Aerospace Requirements
AS 9104	Aerospace Quality Management System Certification/Registration Programs
AS 9101	Quality Management Systems Assessment
AS 9102:2000	Aerospace First Article Inspections – Requirements
ISO 9001:2000	Quality Management Systems – Requirements
ISO 9000:2000	Quality Management Systems – Fundamentals and Vocabulary
ISO 19011:2002	Guidelines for quality and/or environmental Management System Auditing
ISO 10012:2003	Measurement management systems- Requirements for measurement processes and measuring equipment.
ISO 10007:2003	Guidelines for Configuration Management



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## 3.0 EXCLUSIONS

The quality management system shall be appropriate to the nature of our organization and products; it must also comply with our customers and regulatory requirements. For this reason, those requirements of AS 9100 and ISO 9001:2000 that do not apply are excluded from the scope of our quality system. Following rules and criteria are used for excluding irrelevant requirements:

- 3.1 An AS 9100 and ISO 9001:2000 requirement may be excluded only when both of the following conditions are met:
  - The requirement must be within AS 9100 (Paragraph 7) and/or ISO 9001:2000 Product Realization.
  - The exclusion may not affect our ability, nor absolve us from the responsibility, to provide products that meet or exceed our customer and applicable regulatory requirements.
2. Quality Assurance Manager is responsible for identifying those requirements of AS 9100 and ISO 9001:2000 that do not apply, and to propose exclusions of such requirements from the scope of the quality system.
3. Top management has the responsibility and authority for evaluating whether the proposed exclusions are appropriate, and for approving them. Evaluation and approval of exclusions are conducted within the framework of management reviews of the quality system (refer OPM P-56-01.1, Management Review).
4. Any exclusion's taken are documented in this section of the quality manual. The excluded requirements are identified with reference to specific paragraphs and/or statements in the standard. There is also a brief justification why the exclusion is taken and why it is appropriate.

### EXCLUSIONS

- |    |                       |  |
|----|-----------------------|--|
| A. | <b>Exclusion:</b>     | ISO 9001:2000/AS9100, Section 7.3, Design and Development.   |
|    | <b>Justification:</b> | VerTechs Enterprises, Inc. does not perform any Designing of products for our customers. All products are produced from customer drawings, specifications, and/or purchase order instructions. VerTechs Enterprises Inc. is excluding all of Section 7.3 except paragraph 7.3.7, |
| B. | <b>Exclusion:</b>     | ISO 9001:2000/AS 9100 Rev. Section 7.5.1.5 & 7.5.2, Partial exclusion for Service Provisions for "Post Delivery Activities".   |
|    | <b>Justification:</b> | VerTechs Enterprises, Inc. does not provide any "post delivery service activities".  |

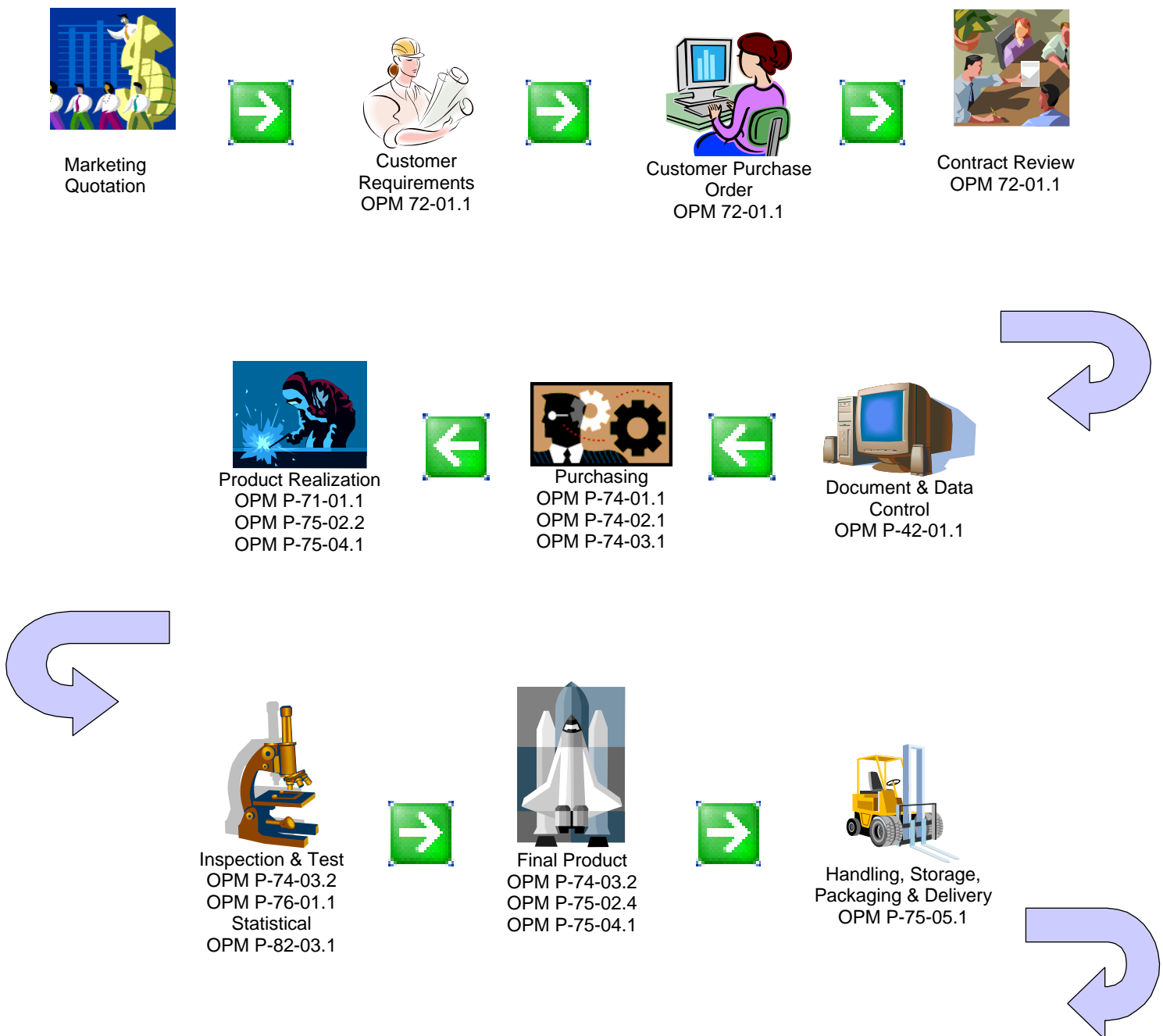


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## 3.2 Quality Manual Process Flow Chart








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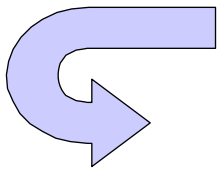
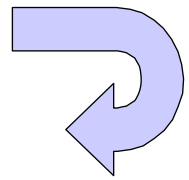
Control of Quality  
 Records  
 OPM P-42-03.1

Continual Improvement,  
 Management Review  
 OPM P-85-01.1  
 OPM P-56-01.1


Customer Satisfaction  
 OPM P-82-01.1




Training of  
 Personnel  
 OPM P-42-03.1




Customer Returns  
 OPM P-72-03.2

Internal Audits  
 OPM P-82-02.1



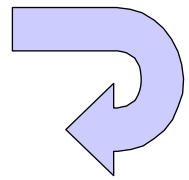
Continued Success




Outstanding World  
 Aerospace Supplier




Advanced Quality  
 System  
 OPM P-82-03.1  
 OPM P-83-01.1  
 OPM P-85-01.1





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## 3.3 Terms & Definitions

3.3.1 For the purpose of this Manual, the terms and definitions given in ISO 9000 apply. The following terms have been changed to reflect the vocabulary currently used:

3.3.1.1 The term "organization" replaces the term "supplier" used in ISO 9001:2004, and refers to the unit to which this manual applies.

3.3.1.2 The term "supplier" now replaces the term "subcontractor".

3.3.1.3 Throughout the text of this manual, whenever the term "product" occurs, it can also mean "service".

## 4.0 QUALITY MANAGEMENT SYSTEM

### 4.1 General Requirements

VerTechs Enterprises, Inc. has established documents, implements and maintains a quality management system and continually improves its effectiveness in accordance with the requirements contained in ISO 9001:2000, AS9100 and other customer required documentation. VerTechs Enterprises, Inc. performs the following:

- a) Identifies the processes needed for the quality management system and their application throughout the organization;
  - b) Determines the sequence and interaction of these processes;
  - c) Determines criteria and methods needed to ensure that both the operation and control of these processes remain effective;
  - d) Ensures the availability of resources and information necessary to support the operation and monitoring of these processes;
  - e) Monitors, measures and analyzes these processes; and
  - f) Implements the actions necessary to achieve planned results and continual improvement of these processes.
- These processes are managed by VerTechs Enterprises, Inc. in accordance with the requirements of this International Standard.
  - When outsourcing of any processes of parts VerTechs Enterprises, Inc. shall flow down all requirements to ensure control of the source.
  - The control of all outsourcing of processes is identified within the Quality Management System.

These processes are managed by VerTechs Enterprises, Inc. in accordance with the requirements contained in the ISO 9001:2000 International Standard and AS 9100 Quality Management System – Aerospace Requirements. The general quality system documentation requirements are contained in our Operation Procedure Manuals Manual OPM P-42-01.1, Quality System Documentation.



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## 4.2 Documentation Requirements

### 4.2.1 General

The quality management system documentation includes:

- a) A written quality policy supported by goals and objectives;
  - b) A quality manual;
  - c) Operation Procedure Manuals, (OPM's);
  - d) Work instructions, standards and technical specifications;
  - e) Records required, (Ref. OPM P-42-03.1).
  - f) Quality system requirements imposed by the applicable Regulatory Authorities
- All personnel will have access to the complete Quality System documents and are trained on their purpose and use.
  - All customers and regulatory authorities shall have access to VerTechs Enterprises, Inc. Quality Management System documentation on our web page, ([www.vertechsusa.com](http://www.vertechsusa.com)) or as requested.

### 4.2.2 Quality Manual

VerTechs Enterprises, Inc. has established and maintains a quality manual that includes:

- a) The scope of the quality management system, including details of and justification for any exclusions;
  - b) Reference to Operation Procedure Manuals established for the quality management system; and
  - c) A description of the interaction between the processes of the quality management system.
- Where the term “documented procedure” appears within the International Standard, this means that the procedure is established, documented, implemented and maintained by VerTechs Enterprises, Inc. Management.
  - The extent of the quality management system documentation may vary due to the organization size, type of processes, complexity, process interactions and competence of personnel.

### 4.2.3 Control of documents

Documents required by the quality management system are controlled by the Management Representative, TDC. Technical documents are controlled by Operation Procedure Manual OPM P-42-02.1, Document and Data Control. This OPM is established to determine the controls needed:

- a) To approve documents for adequacy prior to issue;
  - b) To review and update as necessary and re-approve revisions to documents;
  - c) To ensure that changes and the current revision status of documents are identified;
  - d) To ensure that relevant versions of applicable documents are available at points of use;
  - e) To ensure that documents remain legible and readily identifiable;
  - f) To ensure that documents of external origin are identified and their distribution controlled;
  - g) To prevent the unintended use of obsolete documents, and to apply suitable identification to them if they are retained for any purpose.
- VerTechs Enterprises, Inc. shall coordinate all document changes with customers and /or regulatory authorities in accordance with contract or regulatory requirements.



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## 4.2.4 Control of Quality Records

- Records are established and maintained to provide evidence of conformity to requirements and of the effective operation of the quality management system.
- Records shall remain legible, readily identifiable and retrievable. (Archives)
- Operation Procedure Manual OPM P-42-03.1, Control of Quality Records, is established to determine the controls needed for the identification, storage, protection, retrieval, retention time and disposition of all Quality Records.
- VerTechs Enterprises, Inc. requires its suppliers to maintain all records pertaining to processing of parts as defined in SQR-9001 and purchase order "Quality Notes".
- All records pertaining to any products supplied by VerTechs Enterprises, Inc. shall be made available to our customers and Regulatory Authorities.

## 4.3 Configuration Management

- The organization shall establish, document and maintain a configuration management process appropriate to the product. (Ref. OPM P-71-01.1, Work Instructions, OPM P-42-03.1, Control of Quality Records)

## 5.0 MANAGEMENT RESPONSIBILITIES

### 5.1 Management Commitment

Top management at VerTechs Enterprises, Inc. provides evidence of its commitment to the development and implementation of the quality management system and continually improving its effectiveness by:

- a) Communicating to the organization the importance of meeting customer as well as statutory and regulatory requirements;
- b) Establishing the quality policy which is included in this quality manual;
- c) Ensuring that quality objectives are established;
- d) Conducting management reviews; and
- e) Ensuring the availability of resources.

### 5.2 Customer Focus

- Top management ensures that customer requirements are determined and are met with the intention of enhancing customer satisfaction. Determining and meeting customer requirements as addressed in Operation Procedure Manual OPM P-72-01.1, Contract Review, and are supported by Operation Procedure Manual OPM P-82-01.1, Customer Satisfaction



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## 5.3 Quality Policy

Top management ensures that the quality policy:

- a) Is appropriate to the purposes of VerTechs Enterprises, Inc.,
- b) Includes a commitment to comply with requirements and continually improve the effectiveness of the quality system,
- c) Provides a framework for establishing and reviewing quality objectives,
- d) Insures the quality objectives are communicated and understood within the organization, and
- e) Reviews the quality objectives for continuing suitability at each management review.

## 5.4 Planning

### 5.4.1 Quality objectives

- Top management guarantees that quality objectives, including those needed to meet requirements for products and services are established at relevant functions and levels within VerTechs Enterprises, Inc.
- The quality objectives are measurable, consistent with the quality policy and reviewed during each management review in compliance with Operation Procedure Manual OPM P-56-01.1, Management Review.

### 5.4.2 Quality management system planning by senior management ensures that:

- a) The planning of the quality management system is carried out in order to meet the requirements in paragraph 4.1 above, as well as the quality objectives.
  - b) The integrity of the quality management system is maintained when changes to the quality management system are planned and implemented.
- Management Review Records makes evident that senior management is committed to identifying, recording and communicating the requirements of the quality management system. This is evident by management addressing the Quality Objectives and status of their implementation.
  - Quality management system planning is addressed in Operation Procedure Manual OPM P-42-01.1, Quality System Documentation, as well as in each relevant Operation Procedure Manual.

## 5.5 Responsibility, Authority and Communication

### 5.5.1 Responsibility and authority

Top management ensures that responsibilities and authorities are defined and communicated within VerTechs Enterprises, Inc. through Job descriptions which are maintained by Human Resources for each function within VerTechs Enterprises, Inc. These Job Descriptions identify departmental responsibilities and authorities. The following is a brief summary of job responsibilities within VerTechs Enterprises, Inc.:

- a) President
  - Formulates the quality policy
  - Provides resources necessary to maintain the quality system
  - Conducts management reviews of the quality system
  - Establishes and updates the business plan



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- b) Vice President
  - Assists the President in all matters
  - Manages the safety and environmental control programs
  
- c) Manufacturing Engineering Manager
  - Participates in product quality planning
  - Controls and monitors processes
  - Develops manufacturing processes
  - Verifies process capability
  - Selects methods for process performance monitoring
  - Establishes manufacturing job packages
  - Ensures preventive maintenance is performed
  - Manages & participates in continuous improvement program, (MCAB)
  - Manages Engineering Document Control, (drawings, work instructions, etc.)
  - Develops and builds required tooling
  
- d) Production Control Manager
  - Participates in product quality planning
  - Coordinates schedules for WIP in manufacturing
  - Establishes manufacturing job packages
  - Performs preventive maintenance
  - Plans manufacturing facilities, equipment and processes
  - Participates in continuous improvement program, (MCAB)
  - Responsible for packaging of products
  - Ships products to customers
  - Receives purchased products
  - Marks or verifies material acceptance and product identification
  - Ensures all shop personnel are properly trained
  - Establishes job descriptions for all shop personnel.
  
- e) Customer Service / Production Control
  - Participates in product quality planning
  - Schedules WIP for manufacturing
  - Material Control, in shop
  - Packaging and Shipping



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- f) Sales
    - Conducts market research to anticipate customer expectations
    - Collects and analyzes customer satisfaction data
    - Establishes specifications for new products (product briefs)
    - Advertises and promotes company's products
    - Monitors the quality of competitors
    - Carries out Request for Quote (RFQ), contract and contract amendment reviews
    - Manages the customer complaints program
  
  - g) Purchasing
    - Prepares and approves purchasing documents
    - Orders controlled materials for use in the shop
  
  - h) Human Resources
    - Defines personnel qualification requirements
    - Implements actions to motivate personnel
    - Maintains all personnel training records
    - Ensures training is conducted and recorded
    - Ensures training effectiveness evaluations are conducted and recorded
    - Maintains the training matrix
  
  - i) Quality Manager / Engineer
    - Participates in product quality planning
    - Establishes and maintains the quality management system
    - Responsible for Auditing implementation and effectiveness of the quality system
    - Initiates requests for, and follows up on, corrective and preventive actions
    - Coordinates & participates in continual improvement program (MCAB)
    - Selects and approves qualified suppliers
    - Carries out supplier quality surveys and audits
    - Evaluates and reports on the performance of suppliers
    - Assures the system Maintains and Calibrates IM and TE
    - Monitors the Customer Return Material & Authorization (CRM) program
    - Manages product rework
    - Material Control, receiving, inspection & releasing



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- Ensures the inspections and testing functions are performed
- Handles nonconforming products with support from manufacturing engineers
- Coordinates quality system document control activities, TDC.
- Ensures all personnel are trained in the process of the quality management system Operation Procedure Manuals, OPM's.
- Ensures the performance of, and maintains the calibration of IM and TE

j) Quality Assistant / TDC

- Participates in product quality planning
- Supports the quality management system
- Assists in follow-up on corrective actions (CAR's), customer and internal
- Performs follow-up on internal audits to assure completion
- Supports the quality manager in completion of supplier and third party audits
- Maintains records on the Customer Returned Material (CRM)
- Performs all responsibilities of Technical Document Control (TDC)
- Supports & participates in continuous improvement program, (MCAB)

k) Management Representative

VerTechs Enterprises, Inc. appoints the Quality Manager as the Management Representative. The Management Representative has the authority and responsibility to ensure that the quality management system is maintained and its efficiency is continually improved, to report on the performance of the quality management system to top management, to ensure the promotion of awareness of customer requirements throughout VerTechs Enterprises, Inc. and to ensure that the system always complies with the requirements of AS 9100, ISO 9001:2000 and other customer operating system requirements.

5.5.2 Management Representative: Top management shall appoint a member of management who, irrespective of other responsibilities, shall have responsibility and authority that includes:

- a) Ensuring that processes needed for the quality management system are established, implemented and maintained.
- b) Reporting to top management on the performance of the quality management system and any need for improvement.
- c) Ensuring the promotion of awareness of customer requirements throughout the organization.
- d) The management representative shall have the organizational freedom to resolve matters pertaining to quality.





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- e) VerTechs Enterprises, Inc. appoints the Quality Manager as the Management Representative. He has the authority and responsibility to ensure that the quality management system is maintained and its efficiency is continually improved, to report on the performance of the quality management system to top management, to ensure the promotion of awareness of customer requirements throughout VerTechs Enterprises, Inc. and to ensure that the system always complies with the requirements of AS 9100, ISO 9001:2000 and other customer operating system requirements.

## 5.5.3 Internal communications

Top management makes certain that appropriate communication processes are established throughout VerTechs Enterprises, Inc. and that communication takes place regarding the effectiveness of the quality system

## 5.6 Management Review, OPM P-56-01.1

### 5.6.1 General

Management review meetings are conducted quarterly or as necessary. The purpose of these reviews is to assess the continuing effectiveness, adequacy and suitability of the quality management system. Reviews include assessing opportunities for improvement and the need for changes to the quality management system, including the quality policy and quality objectives. The President is responsible for scheduling and conducting these reviews. Conclusions of the reviews are recorded. Detailed rules for scheduling, conducting, and recording management reviews are provided in Operation Procedure Manual OPM P-56-01.1, Management Review.

### 5.6.2 Review input

The input to management reviews includes information on:

- a) Results of audits,
- b) Customer feedback, (Customer Satisfaction)
- c) Process performance and product conformity,
- d) Status of preventive and corrective actions,
- e) Follow-up actions from previous management reviews,
- f) Changes that could affect the quality management system, and
- g) Recommendations for improvement.

### 5.6.3 Review output

The output from the management reviews includes any decisions and actions related to:

- a) Improvement of the effectiveness of the quality management system and its processes,
- b) Improvement of products and services related to customer requirements, and Resource needs.
- c) Changes in Quality Objectives.
- d) Documentation of actions necessary to establish process improvements.



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## 6.0 RESOURCE MANAGEMENT

### 6.1 Provision of resources

Top management at VerTechs Enterprises, Inc. determines and provides the resources needed:

- a) To implement and maintain the quality management system and to continually improve its effectiveness, and
- b) To enhance customer satisfaction by meeting customer requirements.

### 6.2 Human resources

#### 6.2.1 General

- Personnel performing work affecting product quality are competent on the basis of appropriate education, training, skills and experience as defined in their job description.
- Review training records and matrix. Update as new training is completed. Operation Procedure Manual OPM P-62-01.1, Training, addresses the qualifications and competence of company personnel.

#### 6.2.2 Competence, awareness and training Department managers:

- a) Determine the necessary competence for personnel performing work affecting product quality. Competence of training shall be determined by individual testing.
- b) Provide training or takes other actions to satisfy these needs.
- c) Evaluate the effectiveness of the actions taken.
- d) Ensure that company personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives. Review personnel training records.
- e) Human Resources maintain appropriate records of education, training, skills and experience on a training matrix.

### 6.3 Infrastructure

Manufacturing Operations determines, provides and maintains the infrastructure needed to achieve conformity to product requirements. Infrastructure includes,

- a) Facilities, workspace and utilities.
- b) Process equipment, including both hardware and software.
- c) Supporting services, including communications.

### 6.4 Work environment

- Manufacturing Operations determines and manages the work environment and safety needed to achieve conformity to product requirements, including work environmental and safety considerations.
- A factor that may affect the conformity of the product includes temperature, humidity, lighting, cleanliness, protection from electrostatic discharge, etc. Operation Procedure Manual OPM P-64-05.1, Work Environmental and Safety Compliance, addresses these concerns.



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## 7.0 PRODUCT REALIZATION

### 7.1 Planning of product realization

- VerTechs Enterprises, Inc. plans and develops the processes needed for product realization.
- Planning of product realization is consistent with the requirements of other processes of the quality management system.
- In planning product realization, VerTechs Enterprises, Inc. determines the following, as appropriate:
  - a) Quality objectives and requirements for the product,
  - b) The need to establish processes, documents and provide resources specific to the product,
  - c) Required verification, validation, monitoring, inspection and test activities specific to the criteria for product acceptance,
  - d) Records needed to provide evidence that the realization processes and resulting product meet requirements.
  - e) The identification of resources to support operation and maintenance of the product.
- The output of this planning is in a suitable form for VerTechs Enterprises, Inc.'s method of operations.

### 7.2 Customer-related processes

#### 7.2.1 Determination of requirements related to the product Purchase Order determines:

- a) Requirements specified by the customer, including the requirements for delivery and post-delivery activities,
- b) Requirements not stated by the customer but necessary for specified or intended use, where known,
- c) Statutory and regulatory requirements related to the product, and
- d) Any additional requirements determined by VerTechs Enterprises, Inc. These determinations are addressed in Operation Procedure Manual OPM P-72-01.1, Contract Review.

#### 7.2.2 Review of requirements related to the product production

- All affected departments shall review the requirements related to the product. This review is conducted prior to VerTechs Enterprises, Inc.'s commitment to supply a product to the customer. These department personnel must be certain that:
  - a) Product requirements are defined,
  - b) Contract or order requirements differing from those previously expressed are resolved, and
  - c) VerTechs Enterprises, Inc. has the ability to meet the defined requirements.
  - d) The risks, (e.g. new technology, short delivery time) are evaluated.
- Records of the results of the review and actions arising from the review are maintained. (Ref. Contract Review forms in job folders, Form No. P-72-01.1 #1, Contract Review)
- Where the customer provides no documented statement of requirement, the customer requirements are confirmed by Customer Service, Engineering, or Quality before acceptance.



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- Where product requirements are changed, Customer Service, Engineering, or Quality ensures that relevant documents are amended and that relevant personnel are made aware of the changed requirements.
- Operation Procedure Manual OPM P-72-01.1, Contract Review, addresses the requirements for receiving and reviewing Requests for Quote (RFQs), quoting, receiving and reviewing contracts, and receiving and reviewing contract amendments.

## 7.2.3 Customer communication

- VerTechs Enterprises, Inc. determines and implements effective arrangements for communicating with customers in relation to:
  - a) Product information.
  - b) Inquiries, contracts or order handling, including amendments.
  - c) Customer feedback, including customer complaints.
- Operation Procedure Manual OPM P-72-01.1, Contract Review, addresses customer communications concerning product information, inquiries, contracts, and order handling. Operation Procedure Manual OPM P-82-01.1, Customer Satisfaction, addresses customer feedback. Operation Procedure Manual OPM P-72-03.1, Customer Returns, addresses the receipt, processing and resolution of customer returns and customer complaints.

## 7.3 Design and development

VerTechs Enterprises, Inc. does not design its products, see exclusions. (Ref. para 3.0)

## 7.4 Purchasing, Control of Purchased Material, OPM P-74-01.1

### 7.4.1 Purchasing process

- Quality Assurance ensures that purchased products and services conform to specified purchase requirements.
- The type and extent of control applied to the supplier and the purchased product or service is dependent on the effect of the purchased product or service on subsequent product realization or the final product.
- VerTechs Enterprises, Inc. is responsible for all purchases of products and materials from supplier's even suppliers that hold customer / OEM approvals.
- Quality Assurance evaluates and selects suppliers based on their ability to supply products and services in accordance with VerTechs Enterprises, Inc.'s requirements.
- Criteria for selection, evaluation and re-evaluation are established.
- Records of the results of evaluations and any necessary actions from the evaluations are maintained.



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VerTechs Enterprises, Inc. is responsible for the following:

- a) Maintaining a register of approved suppliers is the responsibility of Quality.
- b) A quarterly review of supplier's performance is conducted and reported to the supplier.
- c) A letter stating the status of the supplier is sent to the Quality contact each quarter with the status report.
- d) When required VerTechs Enterprises, Inc. shall use only customer approved suppliers.
- e) The Quality Manager has the authority to disapprove a supplier for not meeting specified requirements of quality and/or delivery of product / materials.

Operation Procedure Manual OPM P-74-02.1, Approval and Evaluation of Suppliers address's the selection, evaluation and re-evaluation of suppliers.

## 7.4.2 Purchasing information

Purchase orders describe the product or service to be purchased, including where appropriate:

- a) Requirements for approval of product, procedures, processes and equipment.
- b) Requirements for qualification of personnel.
- c) Quality management system requirements.
- d) Include the name or other positive identification, and applicable issues of specifications, drawings, process requirements, inspection instructions and any other relevant technical data.
- e) Requirements for test, examination, inspection and related instructions for acceptance by VerTechs Enterprises, Inc.
- f) Requirements for test specimens (e.g., production method, number, storage conditions) for design approval, inspection, investigation or auditing.
- g) Requirements relative to:
  - a. Supplier notification to VerTechs Enterprises, Inc. of nonconforming product.
  - b. Arrangement for VerTechs Enterprises, Inc. approval of supplier nonconforming materials.
- h) The requirements for the supplier to notify VerTechs Enterprises, Inc. of changes in production and/or process definition and, where required, obtain organization approval.
- i) A right of access by VerTechs Enterprises, Inc., our customer, and other regularity authorities to all facilities involved in the order and to all applicable records.
- j) The requirements for the supplier to flow down the sub-tier suppliers the applicable requirements in the purchasing documents, including key characteristics where required.
- Purchasing ensures the adequacy of specified purchase requirements prior to their communication to the supplier.

Operation Procedure Manual OPM P-74-01.1, Control of Purchased Material (Purchasing), addresses purchasing information and requirements.



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## 7.4.3 Verification of purchased product, OPM P-74-03.1

- Quality Assurance establishes and implements the inspection necessary for ensuring that purchased product / raw materials meets specified purchase order requirements. Receiving verification may include obtaining objective evidence of the quality of the product and/or raw materials received from a supplier. This could include Certification of Conformance, test reports, statistical records, process control charts, inspection reports, and/or copies of audits at supplier's premises. Review of the required documentation, inspection of products and/or raw materials upon receipt and delegation of verification to the supplier, or supplier certification. Operation Procedure Manual OPM P-74-03.1, Verification of Product (Receiving Inspection), addresses inspection of received products.
- All material shall be held by receiving inspection, (material control) until it has been verified as conforming to specified requirements.
- When VerTechs Enterprises, Inc. utilizes test reports to verify purchased products and/or raw material the test reports must be verified as acceptable to the specified specifications before release of the material. (Example: verify Hast-x material to the requirements of AMS 5536)
- VerTechs Enterprises, Inc. shall perform a validation test of each supplier's raw materials by testing at minimum annually. ( Send test material to an independent lab for minimum of chemical analysis)
- When VerTechs Enterprises, Inc. delegates verification of materials or parts to our suppliers the verification requirements shall be identified on the purchase order. (Purchase orders for raw materials and products require the addition of "Q" notes on the purchase order).
- Where VerTechs Enterprises, Inc. or its customers intend to perform verification at the supplier's premises, Purchasing states the intended verification arrangements and methods of product release in the purchase order.
- When specified in the contract, the supplier shall offer the right to verify at the suppliers premises or sub-tier suppliers premises that the product / material conforms. This right to verify is afforded to our customer, our customer representative, and/or VerTechs Enterprises, Inc. personnel.
- It is insured that verification by the customer is not used by VerTechs Enterprises, Inc. as evidence of effective control of quality by the supplier. It does not absolve VerTechs Enterprises, Inc. of the responsibility to provide acceptable products / materials, nor shall it preclude subsequent rejection by the customer). This is in compliance with Operation Procedure Manual OPM P-74-01.1, Control of Purchased Materials (Purchasing).

## 7.5 Production and services provision

### 7.5.1 Control of production and services provision

- Production planning considered the following as applicable:
  - Establish process controls and development of control plans were key characteristics have been identified.
  - Identify in-process verification points when adequate verification of conformance cannot be performed at a later stage of realization.
  - The design, manufacture and use of tooling so that variable measurements can be taken, particularly for key characteristics.
  - Special processes, (see 7.5.2)



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- VerTechs Enterprises, Inc. plans and carries out production and services under controlled conditions. Controlled conditions include, as applicable:
  - a) The availability of information that describes the characteristics of the product (refer to Operation Procedure Manual OPM P-72-01.2, Contract Review; Operation Procedure Manual OPM P-71-01.1, Work Instructions).
  - b) The availability of work instructions, as necessary (refer to Operation Procedure Manual OPM P-71-01.1, Work Instructions and Operation Procedure Manual OPM P-42-02.1, Document and Data Control),
  - c) The use of suitable equipment (refer Operation Procedure Manual OPM P-71-01.1, Work Instructions, Operation Procedure Manual OPM P-75-01.1, Preventive Maintenance; Operation Procedure Manual OPM P-75-02.2, Tool Control and OPM P-75-02.3, Tool Inspection).
  - d) The availability and use of monitoring and measuring devices refer to Operation Procedure Manual OPM P-76-01.1, Control of IM & TE, (Inspection Measuring & Test Equipment).
  - e) The implementation of monitoring and measurement (refer to Operation Procedure Manual OPM P-71-01.1, Work Instructions, Operation Procedure Manual OPM P-74-03.2, Verification of Product, In-Process and Final Inspection), Operation Procedure Manual OPM P-76-01.1, Control of IM and TE, Monitoring of Measuring and Test Equipment, Operation Procedure Manual OPM P-82-03.1, Statistical Techniques).
  - f) The implementation of release, delivery and post-delivery activities (refer to Operation Procedure Manual OPM P-71-01.1, Work Instructions, Operation Procedure Manual OPM P-74-03.2, Verification of Product, In-process and Final Inspection, Operation Procedure Manual OPM P-75-06.1, Handling, Storage, Packaging, and Delivery).
  - g) Accountability of all parts during manufacturing (e.g. parts quantity, split orders, nonconforming parts). (Reference OPM P-71-01.1, Work Instructions, OPM P-71-01.1, Para 14.5, & OPM P-83-02.1, Control of Non-conforming Materials.
  - h) Evidence of completion of all manufacturing and inspection operations as planned, or as otherwise authorized. (reference OPM P-71-01.1, Work Instructions)
  - i) A provision for the prevention, detection, and removal of foreign object damage, FOD. (Reference OPM P-75-06.1, Handling, Storage, Packaging & Delivery, para 7.)
  - j) Monitoring and control of utilities and supplies such as water, compressed air, electricity and chemical products to the extent they affect product quality.
  - k) Criteria for workmanship, which shall be stipulated in the clearest practical manner (e.g. written standards, representative samples or illustrations, OPM P-71-01.1, Work Instructions)
- Production operations shall be carried out in accordance with approved data. (7.5.1.1)
  - a) Controlled data shall include drawings, parts lists, and process flow charts including inspection operations. Production documents (e.g. travelers, router, work orders process data cards), and inspection requirements.
  - b) Lists of specific or non-specific tools and machine programs required and any specific instructions associated with their use.  
  
(Reference OPM P-71-01.1, Work Instructions)

Control of production process changes. (7.5.1.2)



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- Personnel authorized to make changes are Manufacturing and Quality Engineers.
- When changes are required by the customer the contact person, (ME or QE) must obtain approval from the customer and/or regularity authority in the form of a letter, fax, change notice, e-mail etc.
- All changes to any process must be documented using the same documentation and a record placed into the job folder and in the Deviation Log.
- Procedures must be followed to control implementation of the changes.
- Changes to the production processes shall be assessed to confirm that the desired effect has been achieved without adverse effects to product quality.

Control of production equipment, tools and applicable machine programs. (7.5.1.3)

- Production equipment, tools and programs shall be validated prior to use in production. They shall be maintained and inspected periodically according to OPM P-75-02.3, Tool Inspection, OPM P-76-01.1, Control of IM&TE, and OPM P-75-01.1, Preventive Maintenance.
- First Article Inspection is required on first run parts, tools, etc. as defined in OPM P-74-03.2, Verification of Product, In-process & Final Inspection.
- Tooling shall be stored and issued as defined in OPM P-75-02.2, Tool Control and periodically checked for condition as defined in OPM P-75-02.3, Tool Inspection.

Control of work transferred temporarily to outside suppliers for processing. (7.5.1.4)

- When planning requires that processing be performed by an outside source the instructions shall specify identify the source and the processing required. This is defined in OPM P-71-01.1, Work Instructions.

Control of service operations, (7.5.1.5)

- See exclusions. (Ref. para 3.0)

## 7.5.2 Validation of processes for production and service provision

Quality Assurance validates any processes for production and services where the resulting output cannot be verified by subsequent monitoring or measurement. This includes any processes where deficiencies become apparent only after the product is in use or the service has been delivered (refer to Operation Procedure Manual OPM P-71-01.1, Process Control, Work Instructions). Validation demonstrates the ability of these processes to achieve planned results.





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- VerTechs Enterprises, Inc. has established arrangements for these processes including, as applicable:
  - a) Defined criteria for review and approval of the processes.
  - b) Approval of equipment and qualification of personnel.
  - c) Use of specific methods and procedures.
    - a. VerTechs Enterprises, Inc. shall control all significant operations and special processes in accordance with instructions in OPM P-71-01.1, Work Instructions.
  - d) Requirements for records.
  - e) Revalidation of processes.
- Confirmation of results of the production of parts shall be recorded and verified. (OPM P-71-01.1, Work Instructions) This shall include special processing. (Ref. OPM P-75-02.5, EDM Testing & Scheduling)

## 7.5.3 Identification and traceability, OPM P-75-04.1

- Where appropriate, VerTechs Enterprises, Inc. identifies its products by suitable means throughout product realization process.
- VerTechs Enterprises, Inc. maintains the identification of the configuration of the product in order to identify any differences between the required configuration and the actual configuration.
- Quality Assurance identifies the product status with respect to monitoring and measurement requirements.
- VerTechs Enterprises, Inc. shall maintain a system for identifying operators and for controlling that identification. (Ref. OPM P-75-05.1, Inspection & Test Status).
- Where traceability is a requirement, Quality Assurance controls and records the unique identification of the product. Operation Procedure Manual OPM P-75-04.1, Product Identification and Traceability, addresses these requirement.
- VerTechs Enterprises, Inc. shall provide within the operating system and according to the level of traceability defined in the customer or regulatory authority requirements a level of traceability for:
  - a) Identification to be maintained through the product life.
  - b) All products shall be manufactured from the same batch or from the same manufacturing batch to be traced, as well as the destination (delivery, scrap) of the same products of the same batch.
  - c) In any assembly, the identity of its components and those of the next higher assembly shall be able to be traced.
  - d) In any given product, a sequential record of its production (manufacturing, assembly, or Inspection) shall be retrievable.

## 7.5.4 Customer property

- VerTechs Enterprises, Inc. is accountable to our customers for any customer owned tooling received at VTE. These tools shall be shown on a Certified Tool List. This accountability continues until formally terminated, in writing, by the customer or return of the tooling. Only the customer may relieve VTE of accountability of their tooling once accountability has been established.
- Tool property records (Certified Tool List) for customer owned tools are subject to periodic audit by the customer. An auditor may want to visit VTE to account for their tools. VTE would be required to account for these tools as well as their condition. When these audits are conducted VTE would be responsible for assisting the customer representative in conducting the audit.



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- Customer supplied product is controlled as defined in OPM P-72-03.1, Customer Returns, paragraph 6.3.

## 7.5.5 Preservation of product

- Manufacturing Engineering & Operations preserves the conformity of products during internal processing and delivery to the intended destination.
- The extent of preservation includes identification, handling, packaging, storage and protection.
- Preservation also applies to the component parts of a product.
- Preservation of product shall also include, in accordance with product specifications and/or regulations, provision for:
  - a) Cleaning
  - b) Prevention, detection and removal of foreign object damage, (FOD).
  - c) Special handling of sensitive products as applicable.
  - d) Marking and labeling including safety warnings.
  - e) Shelf life control and stock rotation as applicable.
  - f) Special handling of hazardous materials.
- To prevent against loss and deterioration, all documents required by the customer and PO are maintained by TDC. (Ref. OPM P-42-02.1, Document & Data Control).
- These requirements are addressed in Operation Procedure Manual OPM P-75-04.1, Product Identification and Traceability; Operation Procedure Manual OPM P-83-01.1, Control of Nonconforming Material/Product, Operation Procedure Manual OPM P-75-06.1, Handling, Storage, Packaging and Delivery.

## 7.6 Control of monitoring and measuring devices, IM & TE, OPM P-76-01.1

- Quality Assurance determines the monitoring and measurement to be undertaken and the monitoring and measuring devices needed to provide evidence of conformity of products to requirements.
- Quality Assurance shall also maintain a calibration register of these monitoring and measuring devices. Quality shall also establish written procedures for calibration of these tools, including details of type, unique identification, location, frequency of checks, check method and acceptance criteria.
  - ❖ Monitoring & measuring devices include, but are not limited to: test hardware, test software, automated test equipment (ATE) and plotters used to produce inspection data. It also includes personally owned and customer supplied equipment used to provide evidence of product conformity.
- Quality Assurance establishes processes to ensure that monitoring and measurement can be carried out and are carried out in a manner that is consistent with the monitoring and measurement requirements.
  - ❖ When monitoring and measuring of devices are such that they cannot be carried out by internal personnel the calibration of these devices shall be performed by an approved outside source.
- Where necessary to ensure valid results, measuring equipment is:
  - a) Calibrated or verified at specified intervals, or prior to use, against measurement standards traceable to international or national measurement standards, (NIST). Where no such standards exist, the basis used for calibration or verification is recorded.
  - b) Adjusted or re-adjusted, as necessary.
  - c) Identified to enable the calibration status to be determined & controlled.



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- d) Safeguarded from adjustments that would invalidate the measurement result.
- e) Protected from damage and deterioration during handling, maintenance and storage.
- f) Recalled to a defined method when requiring calibration.
- In addition, Quality / Calibration assess and record the validity of previous measuring results when the equipment is found not to conform to requirements.
- Quality also takes appropriate action on the equipment and any product affected.
- Records of the results of calibration and verification are maintained.
- When used in the monitoring and measurement of specified requirements, the ability of computer software to satisfy the intended application is confirmed.
- This shall be undertaken prior to initial use and reconfirmed as necessary.
- These requirements are addressed in Operation Procedure Manual OPM P-76-01.1, Control of IM and TE, Monitoring & Measuring Equipment. .

## 8.0 MEASUREMENT, ANALYSIS AND IMPROVEMENT

### 8.1 General

- VerTechs Enterprises, Inc. plans and implements the monitoring, measurement, analysis and improvement processes needed:
  - a) To demonstrate conformity of the product.
  - b) To ensure conformity of the quality management system.
  - c) To continually improve the effectiveness of the quality management system.
- This includes determination of applicable methods, including statistical techniques, and the extent of their use.
  - ❖ According to the nature of the product and depending on the specified requirements, statistical techniques may be used to support:
    - I. Design verification (e.g., reliability, maintainability, safety).
    - II. Process control.
      - a. Selection and inspection of key characteristics.
      - b. Process capability measurement.
      - c. Statistical process control.
    - III. Inspection – matching sampling rate to the criticality of the product and to the process capability.
    - IV. Failure mode and effect analysis.



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## 8.2 Monitoring and measurement (continued)

### 8.2.1 Customer satisfaction, OPM P-82-01.1

- As one of its measurements of the performance of the quality management system, Quality Assurance monitors information relating to customer perception as to whether VerTechs Enterprises, Inc. has complied with customer requirements.
- The methods for obtaining and using this information are detailed in Operation Procedure Manual OPM P-82-01.1, Customer Satisfaction, and are supplemented by Operation Procedure Manual OPM P-72-03.1, Customer Returns, and Operation Procedure Manual OPM P-72-03.1 for Customer Complaints.

### 8.2.2 Internal audit, OPM P-82-02.1

- The Quality Manager ensures that internal audits are conducted at planned intervals to determine whether the quality management system:
  - a) Conforms to the planned arrangements to the requirements of International Standards and to VTE quality management system requirements established by the company.
  - b) Is effectively implemented and maintained.
- An audit program is planned, taking into consideration the status and importance of the processes and areas to be audited, as well as the results of previous audits.
- The audit criteria, scope, frequency and methods are defined in Operation Procedure Manual OPM P- 82-02.1, Internal Audits.
- The choice of auditors to conduct internal audits ensures the objectivity and impartiality of the audit process.
- Auditors are precluded from auditing their own work or work area.
- The responsibilities and requirements for planning and conducting audits, and for reporting results and maintaining records are defined in Operation Procedure Manual, OPM P-82-02.1, Internal Audits.
- Management personnel responsible for the area being audited ensure that actions are taken without undue delay to eliminate detected nonconformities and their causes.
- Follow-up activities include the verification of actions taken and reporting of the verification results.
- Auditors may develop and/or revise check sheets to conduct audits, or use similar methods for conducting internal audits of the Quality Management System.
- An internal audit report shall state if the item being audited meets the requirements of effectiveness, suitability, and addresses conclusions and comments.
- The internal audit report should address any contract and/or regulatory authority requirements as applicable.

### 8.2.3 Monitoring and measurement of processes

- The Quality Manager applies suitable methods for monitoring and, where applicable, measurement of the quality management system processes.
- These methods demonstrate the ability of the processes to achieve planned results.
- When planned results are not achieved, correction and corrective actions are taken, as appropriate, to ensure conformity of the product.



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- In the event of process non-conformity Senior Management shall:
  - a) Take the appropriate action to correct the nonconforming process.
  - b) Evaluate whether the process nonconformity has resulted in product nonconformity. Identify and control of the nonconforming product.
- These requirements are addressed in Operation Procedure Manual OPM P-83-01.1, Non-conforming Material. OPM P-85-02.1, Corrective and Preventive Action, Operation Procedure Manual OPM P-82-02.1, Internal Audits, and Operation Procedure Manual OPM P-82-03.1, Statistical and Improvement Techniques.

## 8.2.4 Monitoring and measurement of product

- Quality Assurance monitors and measures the characteristics of the product to verify that product requirements have been met.
- This is carried out at appropriate stages of the product realization process in accordance with planned work instructions.
- Key characteristics are identified, monitored and controlled.
- When sampling inspection is applied to accept product, a sampling plan and AQL requirement shall be defined in the work instructions.
- When a sampling plan is applied the instructions must prevent acceptance of known nonconformities.
- Customer approval of the sampling plan, work instructions, shall be obtained when required.
- All products shall not be processed or shipped to a customer until verification of conformity can be completed by performing monitoring and measurement activities.
- Evidence of conformity with the acceptance criteria is maintained.
- Records, shop traveler(s) indicate the person(s) authorizing acceptance and release of product.
- Product release and service delivery does not proceed until planned work instructions have been satisfactorily completed, unless otherwise approved by a relevant authority and, where applicable, by the customer.
- These requirements are addressed in Operation Procedure Manual OPM P-74-03.1, Verification of product, Receiving Inspection; Operation Procedure Manual OPM P-74-03.2, Verification of Product, In-Process & Final Inspection, Operation Procedure Manual OPM P-75-05.1, Inspection and Test Status, Operation Procedure Manual OPM P-83-01.1, Control of Nonconforming Materials, and Operation Procedure Manual OPM P-82-03.1, Statistical and Improvement Techniques.

### 8.2.4.1 Inspection documentation (8.2.4.1)

- Measurement requirements for product or services are inspected and documented on an Inspection Conformance Sheet, (ICS) attached to the traveler.
- The ICS is part of the traveler (work instructions) and includes the following:
  - a) Criteria for acceptance and/or rejection.
  - b) The work instructions (ICS) must state where in the sequence the measurement and/or testing operation shall be performed.



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- c) The ICS is the permanent record of all measurements and results of part realization.
- d) The work instruction operation and/or ICS shall state the tooling, inspection instrument or process used for inspection of the characteristic being verified. This shall also include any necessary instructions associated in the use of the tooling and/or inspection instrument.
- When specific testing is required by specifications or acceptance test plans, copies of the testing results shall be maintained with the work instructions.
- When the customer requires VerTechs Enterprises, Inc. to demonstrate product qualification, Quality Assurance shall maintain and provide objective evidence that the product meets the defined requirements.

#### 8.2.4.2 First Article Inspection (8.2.4.2)

- VerTechs Enterprises, Inc. Manufacturing Engineering and Quality Assurance require a first article be performed to inspect, verify and document the representative item(s) meets all requirements. This is performed on all first run production parts, (new parts) as well as any first run on all drawing revision parts.
- These first article reports are forwarded to our customers when required by purchase order / contract.

#### 8.3 Control of nonconforming material, OPM P-83-01.1

- Quality Assurance ensures that products which do not conform to requirements are identified and controlled to prevent its unintended use or delivery.
- The controls and related responsibilities and authorities for dealing with nonconforming product are defined in the Operation Procedure Manual.
- Quality Assurance defines the responsibility for review and authority for disposition of nonconforming product(s).
- Quality Assurance deals with nonconforming product by one or more of the following ways:
  - a) By taking action to eliminate the detected nonconformity.
  - b) By authorizing its use, release or acceptance with the permission of a relevant authority and, where applicable, by the customer.
  - c) By taking action to preclude its original intended use or application.
- Quality Assurance shall prevent dispositions of use-as-is or repair, unless specifically authorized by the customer, if;
  - i. The product is produced to customer design.
  - ii. The nonconformity results in a departure from the contract requirements.
- When product is dispositioned as scrap the material shall be identified and controlled until the product can be rendered unusable.
- Records of the nature of nonconformities and any subsequent actions taken, including permissions obtained, are maintained.
- When nonconforming product is corrected, it is subject to re-verification to demonstrate conformity to the requirements.
- When nonconforming product is detected after delivery or use has started, Quality Assurance takes action appropriate to the effects or potential effects of the nonconformity.



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- VerTechs Enterprises, Inc. shall notify our customers of any suspected nonconforming parts affecting reliability or safety that may have been shipped. This shall be conducted in a timely manner. (within 24 hours of detection)
- This notification of non-conformity shall include as necessary quantity of parts affected, customer and/or organization part numbers, and dates / invoice number of suspect delivered parts.

## 8.4 Analysis of data

- VerTechs Enterprises, Inc. determines, collects and analyzes appropriate data to demonstrate the suitability and effectiveness of the quality management system and to evaluate where continual improvement of the effectiveness of the quality management system can be made.
- This includes data generated as a result of monitoring and measurement and from other relevant sources.
- The analysis of data provides information relevant to:
  - a) Customer satisfaction (refer to Operation Procedure Manual OPM P-82-01.1, Customer Satisfaction),
  - b) Conformity to product requirements (refer to Operation Procedure Manual OPM P-71-01.1, Process Control, Work Instruction and Operation Procedure Manual OPM P-74-03.2, Verification of product, In-process and Final Inspection.
  - c) Characteristics and trends of processes and products including opportunities for preventive action (refer to Operation Procedure Manual OPM P-85-02.1, Corrective and Preventive Action).
  - d) Approved Suppliers (refer to Operation Procedure Manual OPM P-74-02.1, Approval and Evaluation of Suppliers)

## 8.5 Improvement,

### 8.5.1 Continual improvement, OPM P-85-01.1

- Top management at VerTechs Enterprises, Inc. continually improves the effectiveness of its quality management system through the use of the quality policy, quality goals and objectives, audit results, analysis of data, corrective and preventive actions and management review.

### 8.5.2 Corrective action, OPM P-85-02.1

- The Management Representative, Quality Manager takes action to eliminate the cause of nonconformities in order to prevent their recurrence.
- Appropriate corrective actions must be taken to eliminate the root cause of the non-conformity to prevent recurrence.
- Corrective actions are appropriate to the effects of the nonconformities encountered.
  - a) Reviewing customer nonconformities, including customer complaints (refer to Operation Procedure Manual OPM P-72-03.1, Customer Complaints for specific procedures relative to customer complaints).
  - b) Internal nonconformities are processed as defined in OPM P-85-02.1, Corrective and Preventative Action.
    - Determining the root causes of nonconformities,
    - Evaluating the need for action to ensure that nonconformities do not recur,



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- Determining and implementing action needed,
- Recording the results of actions taken, and
- Reviewing corrective action results
- Corrective action requirements shall be flowed down to suppliers, when it is determined that the supplier is responsible for the root cause and corrective action.
- Requirements for timely and/or effective corrective actions are stated and if not met are escalated to upper management.

## 8.5.3 Preventive action, OPM P85-02.1

- The Management Representative determines actions to eliminate the causes of potential nonconformities in order to prevent their occurrence.
- Preventive actions are appropriate to the effects of potential problems.
- Operation Procedure Manual OPM P-85-02.1, Corrective and Preventive Action, addresses the requirements for:
  - a) Determining potential nonconformities and their root causes,
  - b) Evaluating the need for action to prevent occurrence of nonconformities,
  - c) Determining and implementing action needed,
  - d) Recording the results of the action taken, and
  - e) Reviewing preventive action taken.





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## 9.0 Qualification Documents:

### 9.1 AS/ISO Certification Certificate

PENDING



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## 9.2 Scope and Statement of Authority

VerTechs Enterprises, Inc. recognizes its responsibilities as a manufacturer and processor of aerospace products to fully comply with all contractual provisions and regulatory authority requirements. To meet these responsibilities VerTechs Enterprises, Inc. has developed a comprehensive Quality Management System. This system establishes controls throughout the entire manufacturing processing cycle from proposals and quotes to product delivery. It also assures meeting company quality objectives and minimizes the possibility of compromises, which could affect product quality, safety and reliability.

The VerTechs Enterprises, Inc. Quality Manual and supporting documents was prepared to provide assistance to all departments in understanding and implementing the quality assurance activities associated with their functions. The Quality Manual is a narrative description of the quality system, designed to provide all our employees, as well as our customers, with an overview and insight into the quality procedures that govern VerTechs Enterprises, Inc.

The Quality Manual is an instruction document prescribing specific actions and assigning responsibilities for those actions. Compliance with this manual is mandatory for all personnel.

The Quality Manager for VerTechs Enterprises, Inc. has the responsibility and authority for assuring full implementation of the complete Quality Management System, including control of the Quality Manual and the issuance of the supporting operation procedures manuals. The Quality Manager is the VerTechs Enterprises, Inc. contact representative.

Issuance of the Quality Manual is an uncontrolled document and can be issued through our web page, ([www.vertechsusa.com](http://www.vertechsusa.com)). Revisions to his manual will be made as necessary to keep it current with changing customer and regulatory authority requirements. Customer representatives shall be advised of any major changes to the Quality Manual and/or it key personnel. Suggestions for the improvement of this manual are requested from its users.

This statement applies to all divisions of VerTechs Enterprises, Inc.

REVIEWED AND APPROVED BY:

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Geosef (Joey) Straza  
President

\_\_\_\_\_  
Howard Hawver  
Quality Manager



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## 9.3 Company Profile

❖	Year Started	1970, (Thirty Seven Years)
❖	Number of Employees	16
	➤ Quality:	2
	➤ Administrative:	5
	➤ Engineering:	1
	➤ Manufacturing:	10
❖	VTE, Plant , Square Feet: 10051 Old Grove Rd. San Diego, CA 92131	24,328 Square Feet, This includes 2,942 Sq. Ft. mezzanine.
❖	Major Customers:	Solar Turbines, General Dynamics, Rohr Industries, GKN Chemtronics, Airbus, Kuwait Air, Hamilton Sunstrand, Senior Flextronics, General Electric, Pratt & Whitney
❖	Shifts:	One (1) shift, (5 days) 7:00 – 15:30
❖	<u>Equipment:</u>	<u>VTE, 10051 Old Grove Rd, San Diego, CA 92131</u>

### Facility Tool List

#### EDM:

1-Mitsubishi Wire-Cut EDM Systems  
DWC-90G 5-Axis  
DWC-110F 4-Axis  
DWC-110C 4-Axis.  
(Cap:4"TH x 6"W x 12"L)  
1-20 Amp.Ex-Cello Tank Capacity  
(30 x 16 x 14" deep

#### Lathes:

1-Poreba TPK90  
35-1/2" Swing Over Carriage and 120"  
B.C. 49" Swing in Gap 10" Wide  
1-Tarnow 20-1/2" Swing/30" Over-Gap  
and 118" B.C. with taper attachment  
1-19-1/2" Swing Okuma  
1-17" Swing Mori Seiki

#### Mills:

1-Summit 3-1/2" Boring Mill with 3-Axis  
Digital Read-Out, X-50, Y-35, Z-20  
1-4 H.P. CNC Shizouka-Bandit 3-Axis  
Mill, X-32" Y-17", Z-5-1/2"  
3-Bridgeport Vertical Mills 12"-48"

2-11" Swing Hardinge

#### Grinders:

1-Ko.Lee Surface Grinder 6" x 12"  
1-Summit Surface Grinder 12" x30"  
1-Boyar-Schultz Surface Grinder 6" 18"



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2-Tree Vertical Mill 12"-48"  
1-Fexac Model #3 Universal Overarm  
Vert.-Horiz. Mill 14" x 72" Table  
19" High  
1-Deckel K-21 3 Dim.Pantograph  
1-Shizouka 5-HP Mill Model SV-CH

### Jig Borers:

1-Cleereman Jig-Borer  
18 x 30 x 20" with Digital Read-Out  
1-Bridgeport with Digital Read-Out  
1-Vulcan-Air Jig Grinder

### Punch Presses

1-E.W. Bliss 60 Ton Punch Press

### CNC Machines

1-Okuma Mill, x-40, Y-20  
1-HASS 4-Axis Mill  
with Probe inspection capabilities

### CAD/CAM

AutoCAD 2002  
MasterCAM ver 9  
1 HAAS x40, Y-20

### Forming

French oil 1,000-ton Hydraulic press

### Misc. Facilities & Accessories

1-Sunnen Hone Complete w/arbors  
1-50 amp Arc Welder  
1-300 amp Arc and Heliarc welder  
1-Gas Welding Equipment  
1-Standard Rotary Tables  
1-Ultra Precision 16" Tilt Rot. Table  
1-Cross Slide Rotary Table  
3-Dividing Heads  
1-Key-Setting Press complete  
with Broach Set  
1-Aero Sand Blast Eqpt.Model #500  
1-50-Ton Hyd. Straight Press  
1-1000 lb. Manual Lift Truck  
1-1000 lb. Hyd. Lift truck  
1-Clark Lift – 5000 lbs.  
1-5" Stroke Cadillac Tracer

1-Boyar-Schultz Surface Grinder  
1-Summit O.D. – I.D. Dia. X 36" B.C.  
1-Universal Precision Grinder  
1-Deckle Precision Cutter Grinder  
1-Tool Post Grinder  
1-Cutter Grinder  
3-Pedestal Grinders

### Drill Presses:

1-3-ft. Swing Cinc. Radial Drill  
2-Vari-speed drills Wilton  
1-Medium size drills

### Saws:

1-Powermatic Bandsaw 20" deep  
1-Cincinnati Cut-Off Saw  
1-Summit 350-MP Cut-Off Saw  
1-Startrite Band Saw

### Inspection Equipment:

2-36" -48" Granite Plate  
2-24" Granite Plates  
1-16" -24" Precision Granite Plate  
3-86-Piece "A" Grade Gage Block Sets  
4-Sets Plug Gages  
4-Sets Bore Gages .100 6.000"  
1-Set Misc. Thread and Plug Gages

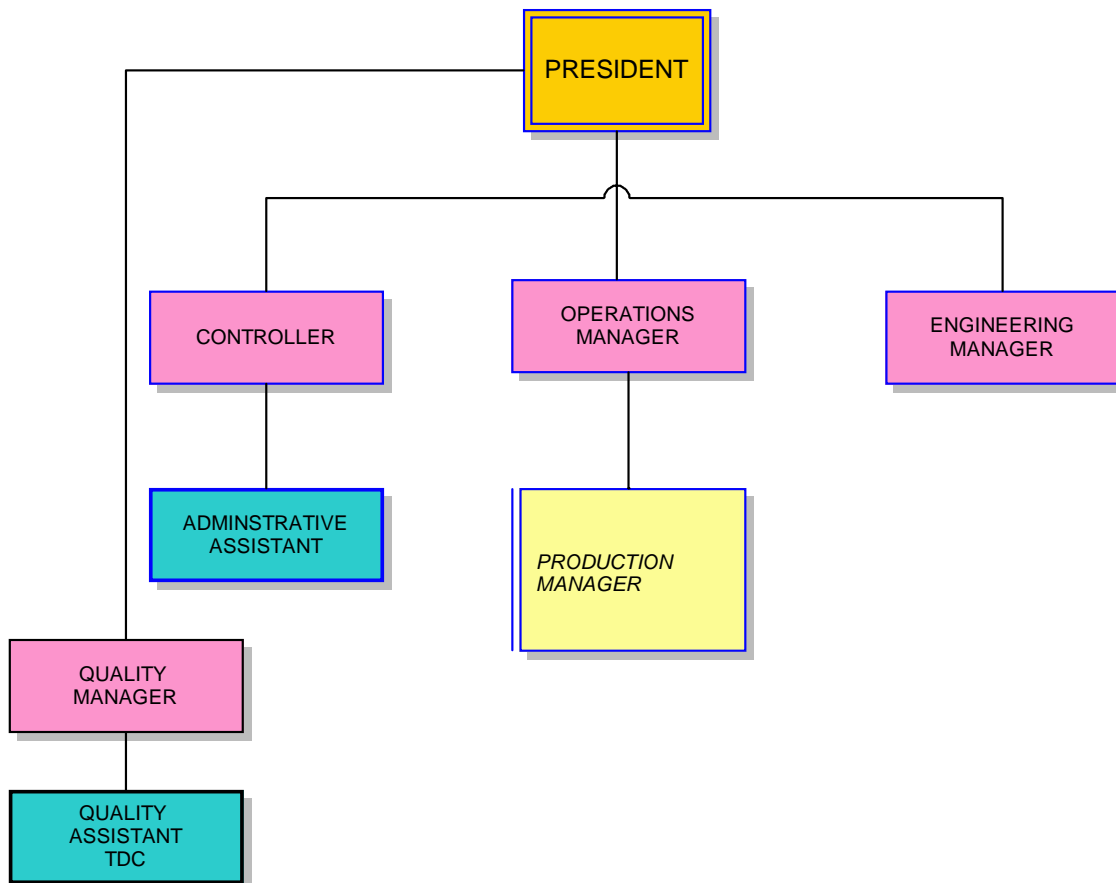
2-Pin Gage Sets  
1-Sheffield Air Gage  
2-Sets 1" -6" Micrometers  
1-Set 6" -12" Micrometers  
1-Set 12" -18" Micrometers  
1-Set 18" -14" Micrometers  
1-Set 2" -40" Inside Micrometers  
1-Set Thread Micrometers  
1-4-ft. Vernier  
3-24" Verniers  
1-10" Sine Plate  
1-6" Sine Chuck  
1-5" -10" Mag.Compound Sine Chuck  
6-Height Gages  
1-Electronic Height Gage  
1-Wilson Hardness Tester  
1-Hardness Gage  
1-Cadillac Gage  
1-24" Solid Square  
1-18" Solid Square  
1-48" Straight Edge  
1-Opticon #2500 10" Comparator  
1-Mitutoyo Toolmaker Microscope



# QUALITY MANUAL

## 9.4 Company Organization Chart

# VerTechs Enterprises, Inc. ORGANIZATION CHART

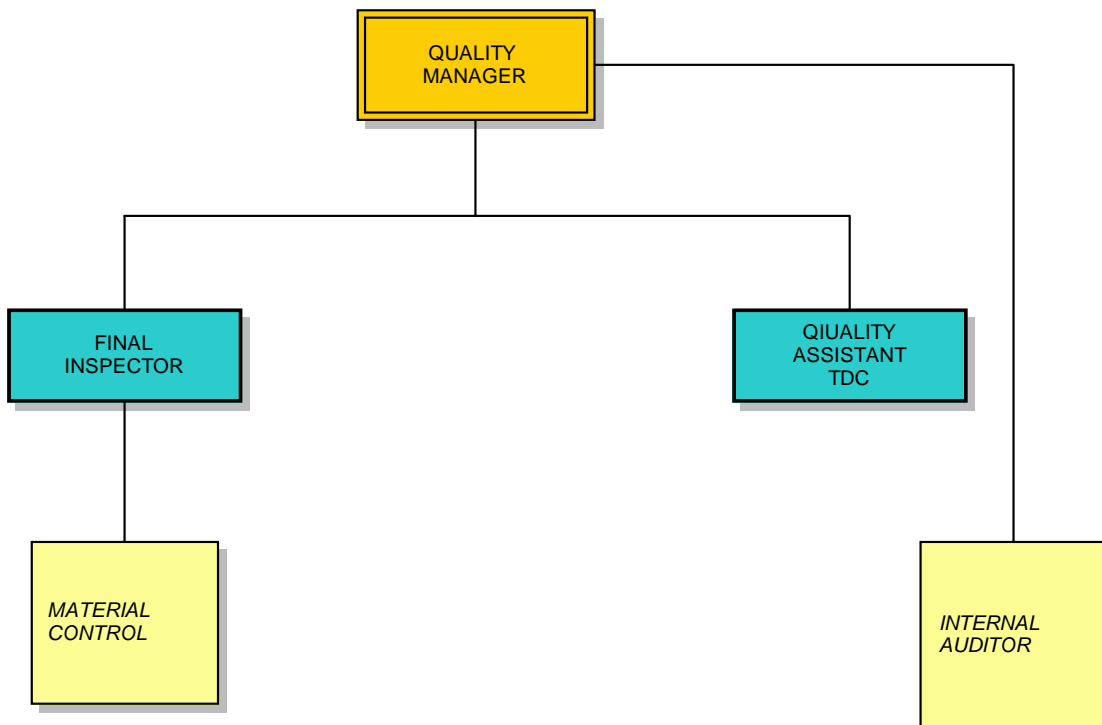




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## 9.5 Quality Organization Chart

# VTE QUALITY ORGANIZATION CHART





# QUALITY MANUAL

## 10.0 APPENDEX 1

List				
	Document No.	Document Title	Revision	Revision Date
1.	OPM P-56-01.1	Management Review	N/C	June 21, 2007
2.	OPM P-72-01.1	Order Processing, Contract Review	N/C	June 1, 2007
3.	OPM P-42-01.1	Quality System Documentation	N/C	July 26, 2007
4.	OPM P-42-02.1	Document Data Control	N/C	May 10, 2007
5.	OPM P-74-01.1	Control of Purchased Material & Processing (Purchasing)	N/C	May 23, 2007
6.	OPM P-74-02.1	Approval and Evaluation of Suppliers	N/C	July 5, 2007
7.	OPM P-75-04.1	Product Identification and Traceability	N/C	May 30, 2007
8.	OPM P-71-01.1	Work Instructions	N/C	May 9, 2007
9.	OPM P-42-02.2	Software Control	N/C	No Document
10.	OPM P-64-05.1	Work Environment & Safety	N/C	July 31, 2007
11.	OPM P-75-02.2	Tool Control	N/C	May 23, 2007
12.	OPM P-75-02.3	Tool Inspection	N/C	May 24, 2007
13.	OPM P-75-02.5	EDM Testing and Scheduling »	N/C	August 7, 2007
14.	OPM P-74-03.1	Verification of product, Receiving	N/C	June 5, 2007
15.	OPM P-74-03.2	Verification of product, In-process and final inspection	N/C	June 7, 2007
16.	OPM P-74-03.3	Verification of product, Testing	N/C	June 11, 2007
17.	OPM P-76-01.1	Monitoring & Measuring Equipment, Control of IM and TE	N/C	June 27, 2007
18.	OPM P-75-05.1	Inspection and Test Status	N/C	May 29, 2007

Note: Paragraph with numbers in parentheses is reference to the AS9100 Standard, i.e. (8.2.4.2) refers to First Article, Pg. 35 AS9100.



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19.	OPM P-83-02.1	Nonconforming Materials	N/C	July 10, 2007
20.	OPM P-72-03.1	Customer Returns »	N/C	July 18, 2007
21.	OPM P-82-01.1	Customer Satisfaction	N/C	June 28, 2007
22.	OPM P-85-02.1	Corrective and Preventative Action	N/C	July 19, 2007
23.	OPM P-75-06.1	Handling, Storage, Packaging, and Delivery	N/C	June 14, 2007
24.	OPM P-42-03.1	Control of Quality Records	N/C	May 30, 2007
25.	OPM P-82-02.1	Internal Audits	N/C	July 24, 2007
26.	OPM P-62-01.1	Training	N/C	May 16, 2007
27.	OPM P-82-03.1	Statistical and Improvement Techniques	N/C	August 9, 2007
28.	OPM P-85-01.1	Continual Improvement	N/C	July 3, 2007
29.	OPM P-75-02.4	General Shop Instructions for Direct Employees	N/C	June 28, 2007
30.	OPM P-75-02.6	Standard Rework Instructions §	N/C	August 15, 2007
31.	OPM P-75-02.7	Standard Operation Procedure §	N/C	June 21, 2007
32.				

Note:  
 All Operation Procedure Manuals marked with » was a complete re-write.  
 All Operation Procedure Manuals marked with § is a new document.





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1.	SOP-1101-AS	Authorized Signatures §	N/C	June 21, 2007
2.	SOP-1102-RD	Rework Data Collection Procedure	N/C	August 8, 2007
3.	SOP-1103-CP	Process Capability Procedure	N/C	August 8, 2007
4.				