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Quality System Manual

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Quality System Manual

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INTRODUCTION

Advanced Measurement Labs, Inc. is a provider of quality control services. Its primary business is to inspect parts to customer specifications, consult and advise customers on technical issues. Advanced Measurement Labs, Inc. does not assemble or manufacture in part or in whole any product.

The purpose of this manual is to describe the Quality Assurance Program implemented by Advanced Measurement Labs, Inc. (hereafter referred to as AML). AML is currently accredited to ISO9001:2008 and compliant to applicable elements of AS9100 Revision "B" (Design Activity Exemption 7.3, all manufacturing, and 7.5.1.5 Servicing), Regulatory, and Customer requirements. AML's policy is to apply this Quality Assurance Program to all Phases of our operation.

Written procedures and inspection instructions for implementation of the Quality Assurance Program is established as dictated by the services performed and the level of instructions needed. The Quality Assurance Manager/President shall annually review the Quality Assurance Program for conformance to the requirements of ISO9001:2008 and AS9100 Revision "B" in the current revision, and make the necessary changes in the Quality System Manual.

1.0 SCOPE

1.1 General: The Quality Program is implemented and assures that the specifications of AS9100 revision "B" and ISO9001:2008, regulatory and customer requirements are applied to all contracts requiring the assurance that all processes are in control, and that the acceptability of product and services through the detection and prevention of nonconformity. Additional customer requirements are applied per purchase order requests. The scope of the quality management system is to conform to AS9100 revision "B", ISO9001:2008 and customer Quality Requirements with exclusions for Design Activity 7.3 and 7.5.1.5. AML does not "Service any Customer Property" in terms of performing maintenance, repair, or rework. AML exclusively performs dimensional inspection to customer requirements. AML does not design or service any product. Exclusions do not affect AML's ability, or responsibility, to provide inspection service that meets customer and applicable regulatory requirements (as applicable, regulatory requirements will be contract product or process based such as FAA, Hazardous, or DOD, etc. This element is not implied to require objective evidence for Federal, State, or Local regulatory general requirements imposed as normal business operational requirements).

1.2 Application: The Quality Program is applicable when:

- a) Product specifications are stated in terms of an established Inspection specification from the customer.
- b) Special Inspection projects where no specific design data is established and the customer wants diagnostic or exploratory type inspection per their instructions.

2.0 NORMATIVE REFERENCE

The following normative documents contain provisions which, through reference in this text, constitute provisions of AS9100 “B.” For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, as this management system manual is based on these International Standards, AML makes every effort to investigate the possibility of applying the most recent edition of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies.

AS 9100 Rev. B – Aerospace Standard

ASME Y14.5M 2009 – Dimensioning & Tolerancing

ASME B89.1.12M – Methods for Performance Evaluation of Coordinate Measurement Machines

ISO 9001:2008 – Quality Management System – Requirements

ISO 8402:1994 – Quality Management & Quality Assurance - Vocabulary

3.0 TERMS AND DEFINITIONS

For the purposes of this Quality system manual, the terms and definitions given in ISO 9000 apply. The following terms, used in this edition of ISO 9001 to describe the supply chain, have been changed to reflect the vocabulary currently used:

Supplier → **Organization** → **Customer**

The term “organization” replaces the term “supplier” used in ISO 9001:2008 and refers to the unit to which AS9100 applies. Also, the term “supplier” now replaces the term “subcontractor”.

Throughout the text of this QSM, wherever the term “product” occurs, it can also mean “service” performed by AML.

Key Characteristics: The features of a material, process, or part whose variation has a significant influence on product configuration.

Note: The quality system manual and supporting documentation are linked through the revision of the top level procedure. This takes the form of a letter at the QSM level.

Note: The quality system manual and supporting documentation are linked through use of the same element number for each requirement. For example, the requirements in QSM 4.2.3 would be expanded on in QAP 4.2.3.

Note: In this Quality system manual, the term “material” applies only to the customer supplied material and tooling.

QSM – Quality System Manual

QMS – Quality Management System

QAP – Quality Assurance Procedure

QSM Flowcharts

CRP – Contract Review Process
RPP – Realization Planning Process
ICP – Inspection/Test Completion Process
FIP – Final inspection Process
MID – Monitoring of Inspection Lab Data
SP - Shipping Process
RP - Receiving Process
NCP – Non-Conforming Product

4.0 QUALITY MANAGEMENT SYSTEM

4.1 General Requirements

The quality management system is created, maintained, implemented and will be continually improved per ISO9001:2008 and AS9100 revision "B", and customer requirements. AML Management has determined that outside professionals, in-house experts, and employees from all departments are part of the Quality Management System for all customer, supplier and internal quality issues. "Quality Management" is not limited to Quality Department Personnel.

- a) AML determines the processes needed for the quality management and their applications. These consist of flow charts for required processes such as contract review, product (inspection) realization, monitoring, and other quality functions.
- b) The sequence of operations, inspections, and performance requirements are documented.
- c) Inspection instructions are used for determining the criteria and methods of ensuring that the inspections and controls of the processes are effective.
- d) Management determines the required resources, information, and monitoring required to ensure the performance of the required processes. The requirements are defined in documented procedures, inspection instructions, and Quality data.
- e) Management defines the method of monitoring, measuring where applicable and the analysis of the process based on the task, complexity, and requirements. Monitoring is documented on the "Data Monitoring and Analysis" form QADMA001, inspection data, or as required by the procedure for receiving, first article, in-process and final inspection governing the process.
- f) Management achieves planned results by means of inspection instructions, flow charts, procedures, documented training and company documents.
- g) Quality system requirements imposed by the applicable regulatory authorities.
- h) Outsourcing of any process that affects material conformity with requirements, AML ensures the type and extent of the control over such processes by documented Purchase orders, terms and conditions, documented Tender offers, and/or requirements for quality process verification at the suppliers or upon receipt at AML. The criteria and methods for control of inspection processes are found in internal procedures, and inspection instructions. The information necessary for the operation and monitoring of these processes is found within available controlled documents. Upon completion of measurement and monitoring of the processes, appropriate action is taken to assure objectives and continual improvement. When any process is outsourced to a supplier, management controls the acceptability and conformity to documented requirements.

4.2 Documentation Requirements

4.2.1 General: Documents included in our Quality Management System are based on organization size, the complexity and interaction of the process in our quality management system, and personnel competency.

These documents include:

- a) The documented statements of a quality policy and quality objectives.
- b) A Quality System Manual.
- c) Documented procedures and records required by ISO9001:2008, and AS9100 revision "B".
- d) Documents including records determined by AML to be necessary ensure the effective planning, operation and control of its processes.
- e) Quality system requirements imposed by the applicable regulatory authorities; such as federal, state, county, safety, or legal authorities. Customer and/or regulatory authorities' representatives have access to quality management system.

4.2.2 Quality System Manual: AML's management team annually reviews the Quality System Manual for conformance to prevailing standards. The Quality System Manual includes:

- a) The scope of the Quality Management system, including details of and justifications for any exclusion if applicable. (7.3 Engineering).
- b) A matrix has been generated, reference "Attachment A" for the purpose of identifying elements with respect to AS9100 revision "B" and ISO 9001:2008 with the Quality System and Procedures Manuals. Further, to facilitate for documentation traceability, the documented Quality System Manual and corresponding Procedures Manual have the same control number as the specification element. This shall satisfy referencing the documented procedures the relationship between the requirement of the International Standard (AS9100 revision "B") and the documented procedures be clearly shown.
- c) A description of the interaction between the processes of the quality management system is identified in Attachment "B". The interaction of process is controlled through the documentation process. The processes to inspect material is controlled from the customer purchase order by the creation of inspection instructions from the contract review.

All documentation and records of all processes are controlled as quality records by QAP 4.2.4. All supporting tasks, from inspection, training, supplier control, to facilities and equipment control are also controlled through procedures, inspection instructions and level 3 documents (Reference QSM 4.2.3.2). Flow charts, procedures, and instructions describe the interactions specific to individual processes.

4.2.3 Control of Document

Reference QAP 4.2.3

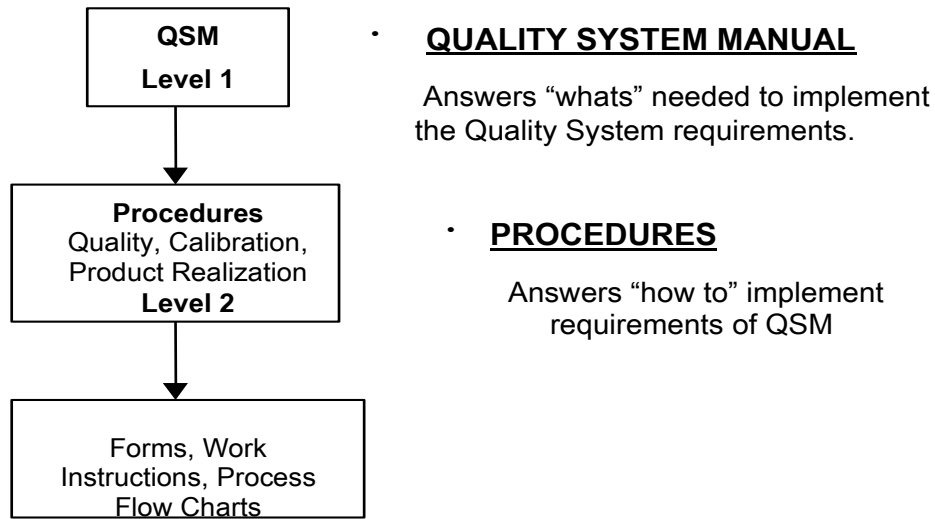
4.2.3.1 General: Document and Data Control Procedure controls all documents and data that relate to all customer quality system requirements including documents of external origin such as standards and customer drawings, as applicable. Relevant external documents and data are controlled and maintained to the latest version or revision level.

Note 1: Documents and data can be as hard copy or electronic media.

- a) Internal documents and data are reviewed and approved for adequacy by authorized personnel before issue.
- b) Documents and data are reviewed and updated as necessary and re-approved by authorized personnel.
- c) Changes to documents and data are reviewed and approved by the same functions that performed the original review and approval, unless specifically designated otherwise. The designated functions have access to pertinent background information upon which to base their review and approval. The review ensures the current status of the document is identified.
- d) The pertinent issues of appropriate documents are available at all locations where operations essential to the effective functioning of the quality system are performed. This shall include applicable procedures and instructions.
- e) To ensure that documents remain legible and readily identifiable
- f) To ensure that documents of external origin as determined by AML to be necessary for planning and operation of the quality management system are identified and their distribution controlled.
- g) Invalid and/or obsolete documents are promptly removed from all points of issue or use, or otherwise assured against unintended use. Any obsolete documents retained for legal and/or knowledge-preservation purposes are suitably identified.
- h) AML coordinates document changes with customers and/or regulatory authorities in accordance with contract or regulatory requirements.
- i) Software used for inspection is controlled by identifying the file with a combination of customer, part number, data, and/or revision. It will be backed up at least monthly and will be retained off premise or in a fireproof safe.
AML shall coordinate document changes with customers and/or regulatory authorities in accordance with contract or regulatory requirements

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4.2.3.2 Documentation Structure: Internally generated Quality System documentation is structured to the following:



4.2.4 Control of Records: The Control of Quality Records Procedure defines the requirements for identification, collection, indexing, access, filing, storage, maintenance and disposition of quality records. Quality records shall be controlled to demonstrate conformance to specified requirements and the effective operation of the quality system. Pertinent quality records from the subcontractor are part of our quality record system. All quality records are legible, readily identifiable and retrievable. These documents are stored to prevent damage or deterioration and to prevent loss. Retention times of quality records are per customer requirement with a period of 10 years. The disposition of records is accomplished by reviewing customer retention period, and after that period either shredding the unneeded records, or archiving in a manner that will retain traceability and prevent damage either through electronic or hard copy storage as determined acceptable by the Quality Manager. Where agreed contractually, quality records are made available for evaluation by the customer or the customer's representative for an agreed period. The method for controlling records that are created by and/or retained by suppliers will be as follows: All supplier quality records concerning AML product including material and processing certifications will be retained for 10 years.

Note: Records may be as hard copy or electronic media. Records shall be available for review by customers and regulatory authorities in accordance with contract or regulatory requirements.

Reference QAP 4.2.4

4.2.4.1 Record Retention and Availability: AML retains quality records for a period of 10 years from end of contract, unless specified otherwise by contract. Records are readily available for review by the customer or regulatory agencies. Records dated prior to the implementation of this manual may not show compliance to AS9100 revision "B" and ISO9001:2008.

4.3 Configuration Management: AML documents and maintains a configuration management process appropriate to the product. The following are elements that are controlled as required by the complexity and appropriateness of the product. *Configuration Identification:* This is the process of defining and identifying the product and all inspection data per customer contracted requirements. *Configuration Control:* this is a series of actions, which manages a design change from the time of the original proposal for change through implementation of approved changes. *Configuration Accounting;* This is the process of recording the status of proposed changes and the implementation status of approved changes. When customer changes are submitted, they are incorporated and controlled after agreement by AML and the customer as to implementation date.

5.0 MANAGEMENT RESPONSIBILITY

Reference QAP 5.1

5.1 Management commitment: The following are expressions of AML management commitment to develop and improve the quality management system

- a) Communication occurs throughout the company about the importance of fulfilling customer, legal and regulatory requirements. That communication happens through the use of: General and product or service specific training, retraining when and where shortfalls appear, Displays and postings in high traffic areas of the facilities, Communication meetings, Specific emphasis in provided documentation
- b) The quality policy (see 5.3)
- c) The quality objectives (see 5.4.1)
- d) The management review records
- e) Ensuring the availability of resource as required by customer requirements (as determined through contract review), company policies, or ISO9001:2008 and AS9100 revision "B" requirements.

Reference QAP 5.2

5.2 Customer Focus: The Quality Manager assures that customer needs and expectations are established by reviewing contracts, rejection data, customer correspondence, delivery data and customer corrective action request. All customer concerns pertaining to expectations are reviewed by the Quality Manager for resolution, continuous improvement or corrective action. The Quality Manager also reviews customer feedback, correspondence, rejection data, delivery data, and contract review data for verification that the customer focus was met and for trends or improvement opportunities.

5.3 Quality Policy:

- a) Is appropriate to the purpose of AML
- b) A commitment to meeting requirements and continually improve the effectiveness of the quality management system
- c) Provide a framework for establishing and reviewing quality objectives
- d) Is communicated and understood within the organization and
- e) Is reviewed for continuing compatibility with quality objectives.

A quality policy statement that has been formulated by the management can be found with the President's endorsement throughout the company premises. It is implemented at all levels in the organization

AML monitors, measures, and analyzes its processes for continuous improvement. Management reviews its Quality Policy during Management Review for its continuing suitability and the effectiveness of the Quality Management System. This Quality Policy is carried out and implemented at all levels in the organization.

5.4 Planning

Reference QAP 5.4

5.4.1 Quality objectives: Top management ensures that quality objectives are established through the process and communicated to the employees. Quality objectives are established at relevant functions throughout the inspection, quality, documentation, purchasing, and administrative functions. The quality objectives are measurable by the acceptance of material and by the satisfaction of our customers. The quality objectives are consistent with the company policy.

5.4.2 Quality Management System Planning: Having created sound measurable quality objectives, each level is required to consider the following as they create quality plans:

- a) The planning of the quality management system relevant to meet the requirements given in QSM 4.1, by means of inspection instructions, procedures, and documented training.
- b) The integrity of the quality management system is maintained when changes to the quality management system are planned and implemented. This is accomplished by having documented procedures and instructions for all quality related tasks, and by having cross training of key quality tasks to more than one employee. Configuration management through revision control ensures control of documentation.

5.5 Responsibility, Authority, and Communication

5.5.1 Responsibility and authority: The responsibility and authority of personnel, who manage, perform and verify work affecting quality, is documented, particularly for personnel who need the organizational freedom to:

- a) Initiate preventive actions relating to material, prices and quality system.
- b) Identify and record any problems relating to material, prices and quality system.
- c) Initiate or recommend solutions through designated channels.
- d) Verify implementation of corrective or preventive actions.
- e) Control further processing, delivery or installation of nonconforming material until deficiencies can be resolved.
- f) Nonconforming material based on AML inspection is returned to customer.

AML defines all jobs that affect quality in the form of job descriptions that include position/job title, department, main job responsibilities, and basic job qualifications. Job Descriptions of personnel who manage, perform, or verify Quality activities are maintained in their personnel file, or training files controlled by the Quality Manager or the President.

AML provides adequate resources, including trained personnel, for management, performance and verification of all quality system activities including internal quality audits. As needed, additional resources are obtained in accordance to applicable company procedure.

5.5.2 Management Representative: The President has appointed a “Management Representative” with the responsibility and authority for:

- a) Ensuring that processes for the quality management system are established, implemented, and maintained.
- b) Reporting the performance and/or any need for improvement of the quality management system to the highest level of management. Overseeing the maintenance of the quality system in accordance with ISO9001:2008, AS9100 revision “B”, Customer, Regulatory requirements
- c) Ensuring the promotion of awareness, encouraging and assisting in extending the understanding of customer requirements to the degree necessary throughout the organization.
- d) The organizational freedom to resolve matters pertaining to quality.

5.5.3 Internal communication: Data indicative of the performance of the quality management system is shared throughout AML in the following ways:

- a) Weekly (minimum) updated inspection schedules with customer priority by the Management for material status.
- b) As required, meetings or memos will be generated for specific or general topics concerning the quality management system.
- c) Accessibility of corrective and preventive action records.

5.6 Management Review

Reference QAP 5.6

5.6.1 General: AML top management will review the quality system at defined intervals, at least annually, sufficient to ensure its continuing suitability and effectiveness in satisfying customer quality system requirements and the company’s stated quality policy and objectives. Records of such reviews are maintained (per QSM 4.2.4). AML’s Quality Procedures Manual defines the Management Review process in greater detail.

5.6.2 Review Input

Quality performance and opportunities for improvement are determined by reviewing the following:

- a) Audit results (internal audits, 3rd party audits, Customer audits, Regulatory audits, Etc.)
- b) Customer feedback, Customer surveys, Customer complaints.
- c) Process performance and product conformance, (Quality, Inspection, Monitoring and Work Order data).
- d) Preventive and corrective action status (Internal, Customers, Supplier)
- e) Carryover follow-up action item from prior management reviews
- f) Quality management system changes from prior quality data
- g) Recommendations for improvement

5.6.3 Review Output: Actions associated with the following are included in the output from management review and include;

- a) Improvement of the effectiveness and processes of the quality management system.
- b) Improvements of product and services associated with customer requirements.
- c) Resources needs.

Management review records are maintained.

6 RESOURCE MANAGEMENT

6.1 Provision of Resources: AML will determine and provide:

- a) To implement and maintain the quality management system and continually improve its effectiveness by review of quality data for opportunity to improve quality management system processes
- b) To ensure customer satisfaction and requirements by documenting those requirements on contract review forms, inspection instructions and verifying their completion through Inspection, and quality documentation review

6.2 Human Resources

6.2.1 General: Personnel at AML performing work affecting conformity to inspection of customer product requirements associated with any of the processes of the quality management system must be competent through education, skills, training and experience as necessary. Requirements for education, skills, training and experience can be found in the employee personnel file and/or job descriptions maintained by Human Resources.

Reference QAP 6.2.2

6.2.2 Competence, Training and Awareness: The Training Procedure describes the method for identifying training needs and then planning and delivering training for all personnel performing quality activities. Personnel performing specific tasks are qualified based on appropriate education, training and/or experience, as required. Appropriate records of training are maintained (QSM 4.2.4).

- a) Management is responsible for the determination of the necessary competency for personnel performing work affecting conformity to product requirements.
- b) Where applicable training will be provided, or AML management will take other actions to achieve the necessary competence.
- c) Effectiveness of the training is evaluated by one or more of the following:
Testing on the material presented during training, operator certification when required, certificates of completion for externally provided training, monitoring process outcomes before and after training, or employee job assessments.
- d) Monitoring the rejection rate as an indicator of continual improvement (training contributes to continual improvement), and to ensure our personnel are aware of the relevance and importance of their activities and how they contribute to the overall quality objectives.
- e) Any employee assigned to perform an inspection or quality task must know the acceptance criteria and how that task contributes to the attainment of the quality objectives. If the affected employee does not understand the importance of his/her work to the objective, an explanation should be provided by the Quality Manager or his designee

f) Human Resources are responsible for keeping records of education, experience, training and qualifications.

6.3 Infrastructure: The Quality Manager (with input and assistance from his staff) determines, provides, and delegates the maintenance to AML employees to maintain the infrastructure needed to achieve conformity to inspection of the product requirements. Consideration is given to the following:

- a) Workspace size & layout. Conditions associated with workspace including but not limited to HVAC, utilities, telephone systems, data lines and compressed air-lines.
- b) Equipment including but not limited to furniture, test hardware and software, storage racks, workbenches, test equipment & tools, computer hardware and software, general office machines and vehicles.
- c) Supporting Services such as transportation-preventive maintenance-calibration-information systems-facilities-etc.

When any change or improvement is identified, it is the responsibility of the Quality Manager to approve those necessary for the achievement of product and/or service requirements.

6.4 Work environment: AML considers and addresses many different aspects of the work environment. Most significant among them are: Facilities, Health and safety, Housekeeping, Work ethics, all managed by the President and his designees.

Reference QAP 6.4

7 PRODUCT (INSPECTION) REALIZATION

7.1 Planning of (Inspection) Product Realization: As AML plans and prepares for inspection to customer requirements, project or contract, the processes required, and the requirements of other quality system processes, the following are determined and as applicable shall be established:

- a) Specific quality objectives and requirements for the inspection process as determined by customer contract
- b) Specific processes and documents, and to provide resources specific for the service required
- c) Verification activities required, validation activities required, monitoring, measurement, inspection, and test activities specific to the inspection process per customer requirements
- d) Records required that provide evidence the inspection processes meet customer, regulatory and specification requirements.
- e) The identification of resources to support operation and maintenance of the inspection process

7.1.1 Process Control: AML identifies and plans the inspection, which directly affect quality and ensures that these processes are carried out under controlled conditions. Controlled conditions include those noted in QSM 7.5.1:

- a) Documented procedures for work orders define the manner of inspection where the absence of such procedures could adversely affect quality, including process control plans, workmanship standards;
 - The preparation, maintenance and monitoring of inspection plans that contain clear, concise and complete instructions for work that affects inspection quality, including references to applicable specifications to customer requirements.
 - Quality planning requirements, including references to applicable specifications on customer plans;

- b) Use of suitable inspection equipment, and a suitable working environment.
- c) Compliance with reference standards/codes, quality plans and/or documented procedures specified drawings, specifications and other requirements.
- d) Monitoring and control of suitable process parameters.
- e) The approval of processes and equipment, as appropriate.
- f) Criteria for workmanship, which are stipulated in the clearest practical manner (e.g., written standards, representative samples or illustrations per customer requirements.
- g) Suitable maintenance of equipment to ensure continuing process capability.
- h) Accountability for all material and evidence that all inspection operations have been completed as planned, or as otherwise documented and authorized.

7.1.2 Process Control Elements: AML addresses the following specific requirements of Process Control Elements in Standard Operating Procedure as applicable: Adequate inspection plans, Drawing configuration control, Part accountability, Quality requirements approval, inspection Schedule, In-process delays, Lot tracking, Suitable equipment available, Suitable work environment, Preventive maintenance, Workmanship standards, Sequence of inspection operations, Evidence of completion, Split orders, Monitoring process specification requirements, Process control methods AML addresses the following specific requirements of Process Control Elements relating to the inspection per customer requirements, in the contract review procedure.

7.1.3 Process Specification (inspection) Requirements: Where process specification (inspection) requirements exist and they are required by customer contract, AML monitors and controls those processes per customer contracted schedule. These requirements are noted on the contract review and noted on the work instructions.

7.2 Customer-related processes

7.2.1 Determination of Requirements Related to the Product: AML only performs dimensional inspection measurements to customer requirements.

Reference QAP 7.2.1

- a) Inspection Service performance requirements provided by the customer including the requirements for delivery and post-delivery activities
- b) Requirements not stated by the customer, but necessary for the required inspection as determined by the customer.
- c) Determination of statutory and regulatory requirements if any applicable to the inspection service such as FDA-FAA-EPA-other federal-state-local-etc. customer imposed (for example, a customer requirement to be ISO9001:2008 and AS9100 revision "B" certificated)
- d) Determination of any additional requirements considered necessary by AML or requirements of the customers.

7.2.2 Review of Requirements Related to the Inspection Process: AML only performs dimensional inspection measurements to customer requirements.

- a) Requirements are defined by customer documentation and resolution if not understood.
- b) Contract or order requirements differing from those previously expressed are resolved, requirements that change after the quote process has begun are addresses prior to work being performed. AML ensures that relevant documents are amended and verified as correct by quality personnel, and that the relevant personnel are made aware of the changes required. Changes are documented on amended inspection instructions, quality records, or on quality memos.
- c) The determination of AML ability to meet the requirements.
- d) Risk (e.g., new technology, short delivery time scale) have been evaluated. Where the customer provides no documented statement of requirement, the customer requirements are confirmed by the organization before acceptance. Where material requirements are changed, the organization ensures that relevant documents are amended and that relevant personnel are made aware of the changed requirements.

7.2.2.1 Contract Review: AML Contract Review Procedure, QAP 7.2.1, defines the requirements for contract review and for the coordination of all related activities. Before submission of a tender, or the acceptance of a contract or order (statement of requirement), the tender, contract or order are reviewed by AML to ensure that: The requirements are adequately defined and documented; where no written statement of requirement is available for an order received by verbal means, AML ensures that the order requirements are agreed before their acceptance. Any differences between the contract or order requirements and those in the tender are resolved. AML has the capability to meet the contract or order requirements. Quality planning is an integral part of the contract review process. Customer requirements that modify the engineering definitions are controlled and implemented.

7.2.2.2 Amendment to a Contract: AML identifies how an amendment to a contract is made and correctly transferred to the functions concerned within AML organization. Management determines the required dates, configuration, quantity, and other customer requirements. If AML cannot meet the requirements, the President or his designee notifies the customer and arrangements or concessions are made and documented.

7.2.2.3 Records: Records of contract reviews are maintained (QSM 4.2.4). The customer purchase order are reviewed and approved by trained personnel, and the evidence of review is the signing, initialing or stamping of the customer purchase order. Customer requirements are noted or referenced on the traveler. Records of requirements reviews and follow-on actions are maintained as Quality Records in the customer file and/or the part number file. When customer requirements have been provided verbally AML must receive a copy (hard copy or electronic copy) of the purchase order prior to initiating work.

7.2.3 Customer Communication: AML communicates via Internet, advertising, emails, phone calls and personal visitation to address:

Product information

Enquiries, contracts or order handling, including amendments

Customer feedback, including customer complaints (Ref. QSM 8.2.1)

- a) Contact required by the customer with other functions, is coordinated by the President or his designee. Customer service is a primary contact for customer communications.
- b) The Quality department coordinates customer feedback and to customer complaints through the use of Corrective and Preventive Action when required, or by means of reports, or memos noting the customer concern and the AML action required.
- c) Customer feedback, including customer complaints.

7.3 Design and/or Development: AML does not design products as part of its normal business operations. The requirements of AS9100 revision "B", and ISO9001:2008 have been noted and considered as not applicable at this time. AML assists customers in any design function required, but as an aid to the customer and under the customer direction.

7.4 Purchasing

Reference QAP 7.4

7.4.1 Purchasing Process: The Purchasing Procedure defines the requirements for purchased products or services to conform to specified requirements.

7.4.1.1 Responsibility: AML only performs dimensional inspection measurement to customer requirements. The President makes supplier selections based on need for products or services to support the inspection process. Acceptable supplier evaluation methods: Surveys, Past History, Customer approval, Product Appraisal, Accreditation or OEM's.

The application of the above approval methods may be changed based on the purchased product's impact on the AML product supplied to the customer. All suppliers that have a direct quality impact on the inspection process are evaluated on the Approved Supplier List at least annually for quality and delivery data. Supplier quality requirements are documented in the Purchasing procedure for continuation on the AML approved supplier list. AML:

- a) Maintains a register of approved suppliers that includes the scope of the approval;
- b) Review supplier performance records at least annually, these reviews are used as a basis for establishing the level of control to be implemented;
- c) Defines the necessary actions to take when dealing with suppliers that do not meet requirements;
- d) Ensures where required that both the organization and all suppliers use customer approved sources;
- e) Ensures that the function having responsibility for approving supplier quality systems has the authority to disapprove the use of sources

7.4.1.2 Evaluation of Subcontractors: AML will:

- a) Evaluate and select suppliers based on their ability to meet supply requirements including the quality system and any specific quality assurance requirements.
- b) Define the type and extent of control exercised by AML over suppliers, depending on:
 - The type of product.
 - The impact of supplier product on inspection service quality.
 - Where applicable, on the Approved Supplier List the commodity or service of the supplier and performance of suppliers.
- c) Include a quality rating based on acceptance percentage and AML ability to inspect product upon receipt;
- d) Establish and maintain quality records of acceptable suppliers (QSM 4.2.4), and establish and maintain an Approved Supplier List that notes the "scope of approval" for all sub-tiers;
- e) Ensure that all suppliers and their sub-tier suppliers are customer-approved special processors and manufacturers' authorized distributors, as required and listed in customers' approved sources documents, unless otherwise specified in the contract.

- f) Ensure that the organization having responsibility for approving supplier quality systems has the authority to disapprove the use of sources that do not have a satisfactory quality system or product history.
- g) Review and assess supplier performance. Records of these evaluations are maintained and used as a basis for establishing the frequency of supplier audits and product inspections. The records are also used for determining whether to offer future bid opportunities.
- h) Maintain procedures that define the necessary corrective actions to take when doing business with an unsatisfactory supplier. These procedures may include providing technical and training assistance.

7.4.1.3 Re-Evaluation of Suppliers: Re-evaluation will be based on if the quality of the product or service ordered met our P.O. requirements and if the supplier delivery was acceptable to the President.

7.4.2 Purchasing Information: Purchasing documents contain the information and data clearly describing the product ordered, including where applicable:

- a) Approval/qualification requirements including as appropriate:
 - Precise identification of product or service ordered
 - Positively identified specifications, drawings, pertinent standards and codes or other technical documents required to establish full acceptability specialized equipment.
- b) Uniquely qualified personnel
- c) Quality management system requirements
- d) The name or other positive identification, and applicable issues of specifications,
- e) Drawings, process requirements, inspection instructions and other relevant technical data;
- f) Requirements for design, test, examination, inspection and related instructions for acceptance by the organization;
- g) Requirements for test specimens (e.g., production method, number, storage conditions) for design approval, inspection, investigation or auditing;
- h) Requirements relative to-supplier notification to organization of nonconforming product and-arrangements for organization approval of supplier nonconforming material.
- i) Requirements for the supplier to notify AML of changes in product and/or process definition and, where required, obtain AML approval;
- j) Right of access by AML, their customer, and regulatory authorities to all facilities involved in the order and to all applicable records, and;
- k) Requirements for the supplier to flow down to sub-tier suppliers the applicable requirements in the purchasing documents, including key characteristics where required.

All AML purchasing documents must be originated in the purchasing department. Each originator of purchasing documents must assure that specifications contained in the purchasing documents are adequate. AML reviews and approve purchasing documents for adequacy of the specified requirements before release.

7.4.3 Verification of Purchased Product: This is a limited process as AML only purchase equipment for inspection or support of the inspection processes. Verification of purchased product or services are based on acceptance by the President or his trained designee for those products or services. The processes for incoming item acceptance may include:

- a) obtaining objective evidence of the quality of the product from suppliers (e.g., accompanying documentation, certificate of conformity, test reports, statistical records, process control),
- b) review of the required documentation,
- c) inspection of products upon receipt, and

d) delegation of verification to the supplier, or supplier certification. Purchased product shall not be used or processed until it has been verified as conforming to specified requirements, unless it is released under positive recall instructions. Where AML utilizes test reports to verify purchased product, the data in those reports shall be acceptable per applicable specifications. Where AML delegates verification activities to the supplier, the requirements for delegation shall be defined in the Purchase Order to the supplier and a register of delegations maintained. Verification by customers shall not be used by AML as evidence of effective control of quality by the supplier, nor shall it preclude subsequent rejection by the customer. When AML stipulates in any contract that purchased product or service is subject to source inspection by AML or AML customer, the details for such inspection and subsequent release of accepted material is stated in the purchase agreement.

7.4.3.1 Verification at Suppliers' Premises: AML does not verify purchased product at the supplier's premises. AML specifies verification arrangements and the method of product release in the purchasing documents.

7.4.3.2 Customer Verification of Supplier Product: Where specified in the contract, AML customer or customer's representative are afforded the right to verify at the supplier's premises and AML premises that supplier product conforms to specified requirements. Such verification will not be used by AML as evidence of effective control of quality by the supplier. Verification by customer will not absolve AML of the responsibility to provide acceptable product, nor does it preclude subsequent rejection by the customer.

7.4.3.3 Delegation of Supplier Verification to Sub-tier suppliers: AML defines the requirements for delegating verification of purchased product to suppliers as follows: All calibration suppliers, Original Equipment Manufacture's and suppliers, replacement parts for AML equipment, support equipment such as CMM probes suppliers will be delegated and authorized to submit C of C's or certifications of acceptance as their proof of product or service verification to AML purchase order requirements. AML will withdraw delegated product verification authority from the supplier when the level of system and product quality is no longer acceptable.

7.4.3.4 Right of Access: AML shall ensure the right of access by AML employees, their customer, and regulatory authorities to all suppliers involved in supplying service, material, or products and to all applicable records, and requirements for the supplier to flow down to sub-tier suppliers the applicable requirements in the purchasing documents, including key characteristics where required. This requirement shall be documented on AML Terms and Conditions, or on purchase order(s) given to the supplier.

7.4.3.5 Requirements Flowdown: AML flows down quality system requirements to suppliers to the extent necessary to ensure that characteristics not verifiable upon receipt are adequately controlled by the supplier.

7.5 Inspection and Service Provisions

7.5.1 Control of Inspection and Service Provision: The control of AML inspection operations are assured by documented inspection instructions that address: as applicable, customer inspection requirements and identification, handling, and method of report format.

Controlled conditions include, as applicable:

- a) The availability of information that describes the characteristics of the material, (dia., size, radius, depth, etc. for example)
- b) The availability of inspection instructions, as necessary,
- c) The use of suitable equipment,
- d) Accountability for all material during inspection (e.g., parts quantities, split orders, nonconforming material),
- e) Evidence that all inspection operations have been completed as planned, or as otherwise documented and authorized,
- f) Provision for the prevention, detection, and removal of foreign objects,
- g) Criteria for workmanship, which are stipulated in the clearest practical manner (e.g., written standards, representative samples or illustrations).
- h) Evidence that all inspection operations have been completed as planned, or as otherwise documented and authorized,
- i) Provision for the prevention, detection, and removal of foreign objects as required by customer contract,
- j) Monitoring and control of utilities and supplies such as water, compressed air, electricity and chemical products to the extent they affect material quality, and
- k) Criteria for workmanship, which are stipulated in the clearest practical manner (e.g., written standards, representative samples or illustrations).

7.5.1.1 Inspection Documentation: Inspection operations are carried out in accordance with customer approved data. The inspection planning and the quality plan are implemented through the work order. This data contains as necessary:

- a) drawings, parts lists, process flow charts including inspection operations, inspection documents (QSM 8.2.4.1), and
- b) a list of specific or non-specific tools and inspection programs required and any specific instructions associated with their use.

7.5.1.2 Control of Inspection Process Changes: Persons authorized to approve changes to Inspection processes are as follows the President, or the Quality Manager. AML identifies and obtains acceptance of changes that require customer and/or regulatory authority approval in accordance with contract or regulatory requirements. Changes affecting processes, equipment, tools and programs are documented. Procedures or work instructions are available to control their implementation. The results of changes to inspection processes are assessed to confirm that the desired effect has been achieved without adverse effects to inspection process quality.

7.5.1.3 Control of Inspection Equipment, Machine Programs: Inspection equipment, tools and programs are validated prior to use and maintained and inspected prior to use and at least yearly according to documented procedures (manufactures maintenance procedures). Validation prior to inspection includes verification of the inspection equipment and software interface by verification of a master gage probe ball. The verification is noted on the inspection report.

7.5.1.4 Control of Work Transferred, on a Temporary Basis, Outside the Organization's Facilities: AML does not transfer work to a location outside the organization's facilities.

7.5.1.5 Control of Service Operations: The inspection service of customer material at our facility is the

main part of our business charter. All inspection servicing performed is per customer written instructions and must be agreed upon prior to the inspection being performed. AML does not "Service any Customer Material" in terms of performing maintenance, repair, or rework.

7.5.2 Validation of Processes for Inspection Provision: AML inspections are per customer requirements. No AML inspection process can be fully verified by subsequent monitoring or measurement. This element is addressed for administrative purposes only

7.5.3 Identification and Traceability: Material Traceability and inspection status is identified per customer requirements from receipt through all stages of inspection, storage, reporting and submittal to the customer upon completion. If traceability is lost, the material is segregated and controlled as nonconforming material until traceability and configuration is confirmed. AML QAP 7.5.3 defines the means to identifying the material from receipt and through all stages of inspection and delivery;

- a) All material inspected per customer contract requirements.
- b) For an assembly inspection, the identification of its components and those of the next higher assembly to be traced;
- c) For a given material, a sequential record of its inspection to be retrieved;
- d) It defines the requirement of handling parts as non- conforming material when traceability is lost per customer requirement;
- e) When acceptance authority media are used (e.g., stamps, electronic signatures, passwords), the organization establishes and documents controls for the media. AML also defines where and to the extent, that traceability is a specified requirement, procedures for unique identification of individual material or batches. This identification is kept as Quality Record (QSM 4.2.4).

7.5.4 Customer Property: Is limited to the parts for AML inspection and any gages or fixtures supplied by the customer for use to hold, control, or as acceptance media. Customer property can include intellectual property and personal data. All customer property is returned after the parts have been inspected per customer requirements.

Reference QAP 7.5.4

7.5.4.1 Notification and Authorization: Supplier disposition of nonconforming customer-, customer's customer- or Government-furnished property requires authorization by the customer, or as otherwise provided in the contract.

7.5.4.2 Receiving Inspection: The receiving inspection process verifies that the received material meets the customer or supplier documented description. When AML purchased product is received, it is verified against AML purchase order requirements.

All nonconforming received product is controlled per QAP 8.3 as applicable. The inspection records are maintained to give historical information of the material or the document's conformance.

7.5.4.3 Nonconforming Material: AML does not produce a product, thus it is not applicable.

7.5.4.4 Storage: AML stores all customer-furnished supplied material to preclude damage, in designated storage area, or per customer requirement.

7.5.5 Preservation of Product: AML's product to its customers is the inspection report of customer supplied material. All inspection reports are preserved and handled as quality documents according to QAP 4.2.3 "Control of Documents" and QAP 4.2.4 "Control of Records."

7.5.5.1 Handling, Storage, Packaging, Preservation and Delivery: Preservation at AML is the prevention of damage and deterioration during all phases of the inspection, handling, packaging, and delivery processes. Provisions for the following are addressed:

- a) Cleaning, of material to allow for the inspection is per customer requirements;
- b) Prevention, detection and removal of foreign objects;
- c) Special handling and packaging of material is per customer requirements;
- d) Marking and labeling of both the material and shipping containers including safety warnings;
- e) Special handling, storage, packaging, and protection of hazardous material per customer contract requirements.
- f) Special handling, storage, packaging, and protection of customer material. When contractually agreed upon AML will note the special customer requirements on the contract review and the work instructions.

7.5.5.1.2 Handling: AML provides methods of handling material that prevent damage or deterioration. When appropriate, methods of handling material include provisions for the detection and removal of foreign objects.

7.5.5.1.3 Storage: AML shall take normal precautions to prevent damage or deterioration of **material** pending inspection or delivery.

7.5.5.1.4 Configuration Control of Customer Material for Inspection : AML has a system to ensure that material for inspection are tagged with traceable job numbers to ensure material for inspection are identified to the appropriate revision level and to contract, drawing and specification requirements.

7.5.5.1.5 Packaging: AML controls, packing, packaging and marking processes (including materials used) to the extent necessary to ensure conformance to customer contracted requirements.

7.5.5.1.6 Delivery: AML arranges for the protection of the quality of material after inspection. Where contractually specified, this protection is extended to include delivery to destination.

7.5.5.1.7 Shipping Documents: AML includes applicable quality documentation as defined by contract and/or specification.

7.6 Control of measuring and monitoring equipment: Control of Measuring and Monitoring Equipment Procedure, defines the requirements for control, calibration and maintenance of equipment (including test software) used to inspect/test conformance of material to specified requirements. AML management determines the monitoring and measurements to be taken and the equipment needed to provide evidence of conformity of material to determine requirements. Inspection, measuring and test equipment is used in a manner, which ensures that the measurement uncertainty is known and is consistent with the required measurement capability. AML maintains a register of these monitoring and measuring devices in a calibration equipment recall database. The process employed for calibration is by outside calibration facilities approved by AML or our customers. The calibration database includes equipment type, unique identification, location, frequency of checks, check method and acceptance criteria. Measuring equipment is;

- a) Be calibrated or verified, or both at specific intervals or prior to use against measurement standards traceable to N.I.S.T.
- b) When adjustments are made, they are made in accordance to the manufactures instructions or documented equipment calibration procedures
- c) Have calibration identification to determine and control calibration status.
- d) All equipment and tools are verified before use to prevent inappropriate adjustments.
- e) Handled and stored in such a manner as to prevent damage or deterioration.
- f) Recalled to a defined method when requiring calibration.

Where test software or comparative references such as test hardware are used as suitable forms of inspection, they are checked to prove that they are capable of verifying the acceptability of material, prior to release for use during inspection, and are rechecked at prescribed intervals. Per QAP 7.6, all equipment and tools are verified prior to use. Where the availability of technical data pertaining to the inspection, measuring and test equipment is a specified requirement, such data is made available, when required by the customer or customer's representative, for verification that the inspection, measuring and test equipment is functionally adequate. Records of the results of the calibration and verification shall be maintained. Confirmation of the ability of computer software to satisfy the intended application will be performed as noted in the Product Assurance Software procedure using either a known "Artifact" or Equipment imbedded

7.6.1 Control Procedure: AML:

- a)** Determines the measurements to be made and the accuracy required, and selects the appropriate inspection, measuring and test equipment that is capable of the necessary accuracy and precision per customer contract requirements.
- b)** Identify all inspection, measuring and test equipment that can affect product quality, and calibrate and adjust them at prescribed intervals, or before use, against certified equipment having a known valid relationship to internationally or nationally recognized standards. Where no such standards exist, the basis used for calibration will be documented. A system for recall of measuring devices that require re-certification will also be documented.
- c)** Define the process employed for the calibration of inspection, measuring and test equipment, including details of equipment type, unique identification, location, frequency of checks, check method, acceptance criteria and the action to be taken when results are unsatisfactory.
- d)** Identify inspection, measuring and test equipment with a suitable indicator or approved identification record to show the calibration status.
- e)** Maintain calibration records for inspection, measuring and test equipment
- f)** Assess and document the validity of previous inspection and test results when inspection, measuring or test equipment is found to be out of calibration. Recall material for re-inspection when this assessment indicates that the result may be nonconforming material.
- g)** Ensure that the environmental conditions are suitable for the calibrations, inspections, measurements and tests being carried out.
- h)** Ensure that the handling, preservation and storage of inspection, measuring and test equipment is such that the accuracy and fitness for use are maintained.
- i)** Safeguard inspection, measuring and test facilities, including both test hardware and test software, from adjustments, which would invalidate the calibration setting.

To assure that measurement capability remains consistent AML requires that measuring and monitoring devices:

- a)** Be calibrated prior to use or at least every two years to NIST traceable standards.
- b)** When adjustments are made, they will be made in accordance to documented equipment calibration procedures
- c)** Be identified and controlled to enable the calibration status to be determined against calibration records.
- d)** Utilize safeguards for inappropriate adjustment. These may include tabs over adjustment screws, knobs, or levers, wax sealants, torque striping, mechanical locks, or as appropriate methods as determined by Quality Management
- e)** Be handled and stored in such a manner as to prevent damage or deterioration.
- f)** Be recalled to a defined method when requiring calibration.

AML will have records of calibration that include the data from the prior calibration, the recall data, who, when, and using what method for the calibration of the equipment. Outside calibration facilities must have a quality system in compliance to ISO 17025 or ISO 10012.

8 MEASUREMENT ANALYSIS and IMPROVEMENT

8.1 General

AML inspection plans are used for planning and defining the necessary monitoring and measurement, analysis and improvement techniques, including statistical techniques (as applicable). When required by customers or determined by management, the following methods may be used to improve or monitor our product or processes. Statistical techniques may be used to support design verification (e.g., reliability, maintainability, safety), process control, selection and inspection of key characteristics, process capability measurements, statistical process control, design of experiment, inspection, matching sampling rate to the criticality of the material and to the process capability, failure mode and effect analysis. When any of the above methods are implemented, they are documented and the results reviewed by the President or his designee for results and potential improvements. Implementation occurs according to the defined plans, the resulting data is analyzed and improvements are pursued. Inspection records are per customer contract requirements.

- a) Demonstrate the conformity of the material requirements
- b) Ensure conformity of the quality management system
- c) To continually improve the effectiveness of the quality management system

8.2 Measuring and Monitoring

Reference QAP 8.2

8.2.1 Customer Satisfaction: AML Monitors and evaluates customer feedback using QSM information related to “On-Time-Delivery, Product Quality, and Customer Service performance”. AML then develops plans that address deficiencies as applicable. The information may include input from customer satisfaction surveys, customer quality and delivery data, customer opinion, rejection, corrective action data, lost business analysis, and actual customer comments. This information is reviewed and a report is created and determinations are made as to the response, corrections, changes required and as to whether customer requirements were met.

Reference QAP 8.2.1

8.2.2 Internal Audit: A strategic system of planned and yearly audits is implemented to verify compliance with all applicable quality procedures and documentation as deemed applicable. This includes procedures, inspection, trainings, process controls and certifications performed. The selection of auditors and conduct of audits shall ensure objectivity and impartiality of the audit process. QAP 8.2.2 has been established to define the responsibilities and requirements for planning and conducting audits, establishing records and reporting results. Records of the audits and their results shall be maintained

- a) Audits help verify customer requirements to the operating instructions. Customer requirements include AS9100, ISO 9001:2008, and the requirements of the QSM.
- b) To effectively implement and maintain internal audits, an audit program is planned with special consideration to the status and importance of the processes of areas to be audited as well as the comparison of the results of previous audits.

Audits are performed annually or as mandated by the importance of the project. Results of these audits constitute an integral part of AML's management review process. Audits are performed in accordance with written procedures that are developed to incorporate AML's and its customers' requirements. The management responsible for the area being audited shall ensure that actions are taken without undue delay to eliminate detected nonconformities and their causes.

Follow up activities shall include verification of the actions taken and the reporting of the verification. Audit findings that can result in product or employee safety will be corrected when possible within 1 working day. Management may extend non-safety or non-product impact corrections for up to 60 days. The acceptability of the above procedure and check sheets is measured against the effectiveness of the internal audit process and overall organization performance.

Reference QAP 8.2.2

8.2.3 Measurement and monitoring of processes: AML shall apply suitable methods for monitoring and, where applicable, measurement of the quality management system processes. These methods shall demonstrate the ability of the processes to achieve planned results. When planned results are not achieved, correction and corrective action shall be taken, as appropriate, to ensure the conformity of the material. In the event of process nonconformity, AML:

- a) Takes appropriate action to correct the nonconforming process,
- b) Evaluates whether the process nonconformity has resulted in material nonconformity, and
- c) Identifies and control the nonconforming material in accordance with clause 8.3.

8.2.4 Monitoring and Measurement of material shall be per customer contract requirements. AML shall monitor and measure the characteristics of the material to verify that material requirements have been met. The monitoring and measurements will be documented on work orders, inspection plans, and quality plans that are created in order to assure inspection to customer requirements, specific material and/or service quality plans. (Note product acceptance to design data is not the goal of AML inspection, the inspection is to note actual condition and have the customer determine acceptance based on AML inspection criteria) The monitoring and measurements of each material or service shall be performed per customer requirements. The Quality Manager, inspectors, and trained employees identified on the signature or stamp log or their training records are authorized to release product for delivery to the customer. Product release or service delivery to the customer must be preceded by successful completion of all required activities unless approved by the Quality Manager or his trained designees or as applicable the customer. AML does not use sampling inspection as a means of material acceptance, all inspection is per customer instructions which may include sample inspection per their requirements. If any statistical inspections are to be performed, they are per customer requirement. AML submits the required information to our customer for its review and the customer will determine acceptability of their product.

Reference QAP 8.2.4, 8.2.4A, 8.2.4B, 8.2.4C

8.2.4.1 Inspection Documentation shall be per customer contract requirements: Measurement requirements for product acceptance are documented. This documentation may be part of the inspection documentation, but includes as applicable:

- a) Criteria for acceptance and/or rejection: review of the inspection report by AML
- b) Inspection record type (report format, digital, hardcopy, etc.)
- c) A record of the measurement results shall be verified by AML for accuracy and completeness to customer contract

d) Type of measurement instruments required and any specific instructions associated with their use.

Inspection records show actual result data. Where required to demonstrate material acceptance, AML ensures that records provide evidence that the material meets the defined requirements.

8.2.4.2 First Article Inspection: AML's system provides a process for the inspection, verification, and documentation of the inspection process set-up and to be documented on the work instruction. This shall be used as the First Article of the inspection process.

8.3 Control of Nonconforming Material being inspected

Reference QAP 8.3, QAP 8.3A

AML shall ensure that material being inspected which does not conform to material requirements is identified and controlled per customer requirements. The controls and related responsibilities and authorities for dealing with nonconforming material being inspected shall be defined by customer contract.

This control will provide for identification, documentation, evaluation, segregation (when practical), disposition of nonconforming material, and for notification to the customer as required.

AML shall ensure that material being inspected which does not conform to material requirements is identified and controlled per customer requirement.

NOTE: The term "nonconforming material" includes nonconforming material returned from a customer.

AML's documented procedure shall define the responsibility for review and authority for the disposition of nonconforming inspection or documentation and the process for approving personnel making these decisions.

AML shall deal with nonconforming inspection or documentation 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 under concession by relevant authority and, where applicable, by the customer;
- c) by taking action to preclude its original intended use or application.

Records of the nature of nonconformities and any subsequent actions, including concessions obtained, shall be maintained (QSM 4.2.4).

When nonconforming inspection or documentation is corrected it shall be subject to re-verification to demonstrate conformity to the requirements.

When nonconforming material being inspected documentation is detected after delivery or use has started, AML shall take action appropriate to the effects, or potential effects, of the nonconformity.

In addition to any contract or regulatory authority reporting requirements, AML's system shall provide for timely reporting of delivered nonconforming inspection data that may affect reliability or safety.

Notification shall include a clear description of the nonconformity, which include as necessary parts affected, customer part numbers, quantity, and date(s) delivered. NOTE Parties requiring notification of nonconforming material may include suppliers, internal organizations, customers, distributors, and regulatory authorities.

Records of the nature of nonconformities and any subsequent action taken, including concessions obtained shall be maintained.

8.4 Analysis of data: In AML, quality management system related data is recorded as indicated in the Quality Records procedure. This data is reviewed with the objectives below in mind and used to determine the suitability, effectiveness and opportunities for improvement of the quality management system. The data analysis objectives for AML as a minimum are:

- a) Assess customer satisfaction levels or to reveal customer dissatisfaction (QAP 8.2.1)
- b) Conformity to customer requirements (QAP 8.2.4)
- c) Characteristics and trends of process and products, including opportunities for preventive action. (QSM 8.2.3 and QSM 8.2.4)
- d) Maintain awareness of the performance of suppliers. (QAP 7.4)

8.5 Improvement

Reference QAP 8.5.1

8.5.1 Planning for Continual Improvement: AML continually improves the effectiveness of the quality management system through the use of the quality policy, quality objectives, audit results, analysis of data, corrective and preventive actions and management review data. The process for continual improvement is described within Continual Improvement, procedure.

Reference QAP 8.5.2

8.5.2 Corrective Action: The Corrective Action Procedure defines the requirements for actions or activities taken to correct and/or prevent potential nonconformities. Any corrective or preventive action taken to eliminate the causes of nonconformities in order to prevent recurrence. Corrective actions shall be appropriate to the effects of the nonconformities encountered and the magnitude of problems and commensurate with the risks encountered. In order to avoid the recurrence of problems, appropriate corrective actions are taken. AML Corrective Action Procedure provides a systematic approach to corrective action problems that includes:

- a) The identification and review of nonconformities including customer complaints
- b) The determination of causes of nonconformities
- c) Assessing the need for actions to ensure that nonconformities do not recur
- d) The determination and implementing of corrective actions needed
- e) The implementation of determined corrective actions
- f) Making records of the outcomes from actions taken
- g) Reviewing the effectiveness of corrective actions taken. Review of the corrective action taken ensures that other nonconformity's do not occur due to the initial correction.
- h) Flow down of the corrective action requirement to a supplier, when it is determined that the supplier is responsible for the root cause, and
- i) Specific actions where timely and/or effective corrective actions are not achieved

8.5.3 Preventive Action: In order to avoid the occurrence of potential problems, appropriate preventive actions are taken. Corrective Actions are reviewed for Preventive Action opportunity in other product, processes or systems.

AML's Preventive Action procedure provides a systematic approach to preventive action problems that includes:

Reference QAP 8.5.3

- a) The identification of potential nonconformities and identification of causes of potential nonconformities from quality data, inspection records, customer, supplier or employee information
- b) The determination of preventive actions needed based on data review, prior nonconformance, process or system data and review
- c) The implementation and determining preventive actions to correct or prevent process, system or material nonconformance.
- d) Making records of the outcomes from actions taken by documenting the action taken, the results expected, and the outcome of the preventive action. This may be documented on a Preventive action form, Quality report, or other "as required" document as determined by management.
- e) Reviewing the effectiveness of the preventive actions taken.

ATTACHMENT “A”

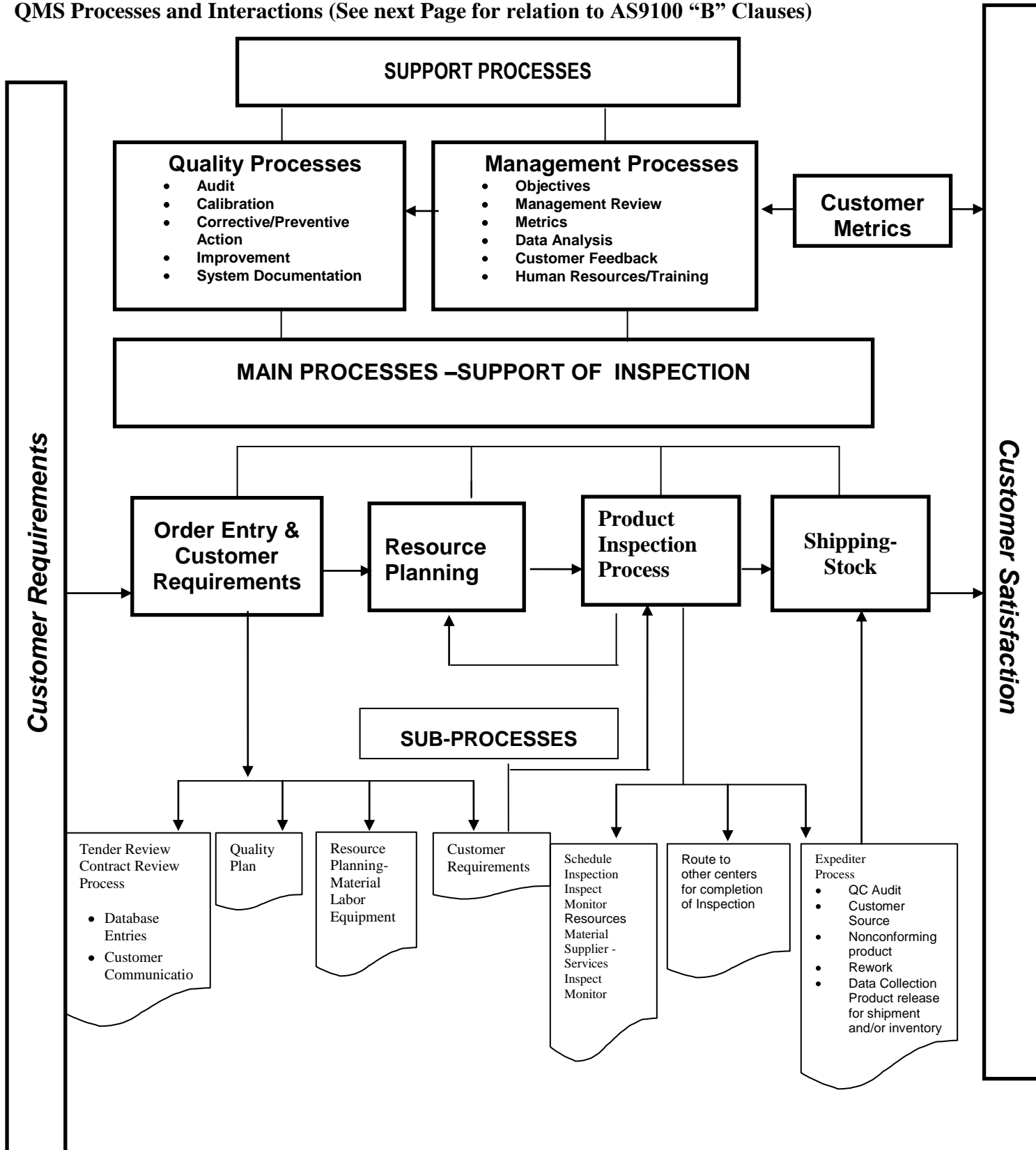
AS9100“B” ISO9001:2008 Element.	Title	QAP	QSM
4.1	Quality Management System Requirements		4.1
4.2.3	Control of Documents	4.2.3	4.2.3
4.2.4	Control of Records	4.2.4	4.2.4
5.6	Management Review	5.6	5.6
6.2.2	Competence, Training, and Awareness	6.2.2	6.2.2
7.0	Product Inspection Realization and Implementation Equipment, Tools, Program Control	7.0 7.5.1.3	7.0
7.1	Planning of Inspection Realization- (Work Order)	7.1	7.1
7.2	Customer Related Processes- (Contract Review)	7.2	7.2
7.3	Design		7.3
7.4	Purchasing	7.4	7.4
7.5.3	Identification and Traceability Inspection and Test Status	7.5.3	7.5.3
7.5.4	Customer-Property	7.5.4	7.5.4
7.5.5	Preservation of Material	7.5.5	7.5.5
7.6	Control of Inspection, Measuring, and Test Equipment	7.6	7.6
8.2	Monitoring and Measurement- (Receiving Inspection, In- Process Inspection, First Article Inspection, Final Inspection) Statistical Process Control	8.2, 8.2A, 8.2B, 8.2C 10.0	8.2
8.2.1	Customer Satisfaction	8.2.1	8.2.1
8.2.2	Internal Quality Audits	8.2.2	8.2.2
8.3	Control of Nonconforming Material (Customer Notification)	8.3, 8.3A	8.3
8.4	Analysis of Data	8.4	8.4
8.5.1	Continual Improvement	8.5.1	8.5.1
8.5.2	Corrective Action	8.5.2	8.5.2
8.5.3	Preventive Action	8.5.3	8.5.3

QAP = Quality Assurance Procedure

QSM = Quality System Manual

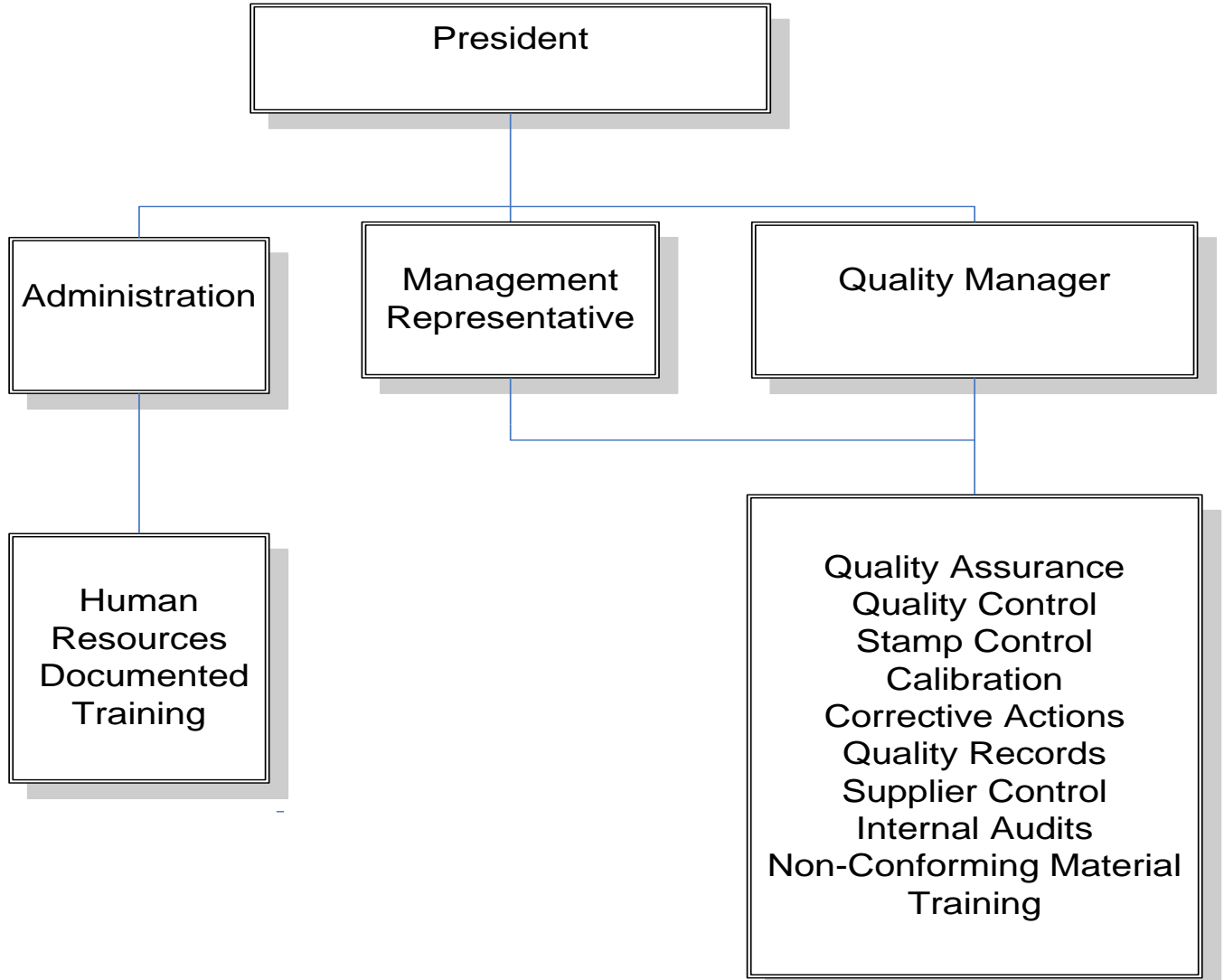
ATTACHMENT "B"

QMS Processes and Interactions (See next Page for relation to AS9100 "B" Clauses)



QMS Processes in Relation to AS9100 “B” Clauses

QMS Process	Applicable AS9100 “B” Clauses
Management Processes Objectives Monitoring Data Analysis Customer Feedback Management Review Human Resources/Training	4.1, 4.3, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 6.1, 6.2, 6.3, 6.4, 7.1, 7.2.3, 8.1, 8.2.1, 8.2.3, 8.2.4, 8.4
Quality Processes Audit Calibration Corrective/Preventive Action Improvement System Documentation	4.2, 7.6, 8.2.2, 8.3, 8.5
Customer Metrics	8.4
Order Entry & Customer Requirements	5.2, 7.2
Resource Planning	7.1, 7.2, 7.4, 7.5
Product Realization	7.5, 8.2, 8.3,
Shipping-Stock	7.5.3, 7.5.5, 8.2.4



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