



AS 9100 C Process Based Requirements

July, 2010

Planning for AS 9100 C

Scope:

The purpose of this document is to provide information and direction on the Aviation, Space and Defense Organizations' expectations for implementation, transition and registration.

Note: Due to the scope and depth of the information made available on-line, compiling all of the requirements in this document is not possible. In addition, requirements are constantly changing and these changes are being made available through various electronic methods. Client's seeking AS 9100 C need to familiarize themselves with industry expectations and keep abreast of changes as they occur.

WWW (Web) References:

International Aerospace Quality Group:
Americas Aerospace Quality Group:
Online Aerospace Supplier Information System (OASIS)
Other Party Management Team Supplemental Rule 001

www.iaqg.org
www.sae.org/aaqg/
www.sae.org/oasis
www.sae.org/oasis

Document References

AS 9100 C: Quality Management Systems – Requirements for Aviation, Space and Defense Organizations is now available for certification

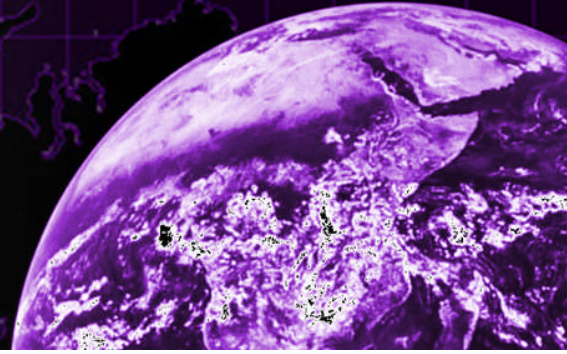
AS 9101 D: Quality Management Systems - Audit Requirements for Aviation, Space, and Defense Organizations

Supply Chain Management Handbook (SCMH) <http://www.iaqg.sae.org/iaqg/handbook/scmhtermsfuse.htm>

Key Dates for Implementation:

www.sae.org/oasis

- 2010 Certification to AS 9100 C is available
- July 1, 2011 All AS 9100 audits must be to the AS 9100 C revision
- July 1, 2012 AS 9100 B is cancelled (All AS 9100 B registrations will be withdrawn regardless of the expiration date on the certificate).
OASIS will be purged of AS 9100 B registrations.



Key excerpts from the process requirements from AS 9100 C & AS 9101 D:

Process Approach:

AS 9110 C requires the use of the process approach and has further defined this approach in AS 9100 paragraphs 0.1 General and 0.2 Process Approach.

Careful consideration of your organization's processes needs to be accomplished to ensure that they are appropriately documented and reflects your processes and not just the requirements of AS 9100 C.

AS 9101 D standardizes the requirements for conducting and reporting of quality management system audits. It provides requirements for an audit and reporting process based on:

- the process and continual improvement approach defined in 9100-series standards;
- the specific aviation, space, and defense additions in 9100-series standards;
- the use of common audit tools; and
- the uniform, transparent, and standardized reporting of audit results.

AS 9100 can be used by aviation, space, and defense organizations at all levels throughout the global supply chain.

Audit Approach:

AS 9101 D supports the engagement and evaluation of an organization's quality management system process approach, as required by the 9100-series standards. When evaluating an organization's quality management system, the following basic questions would be asked of every process, for example:

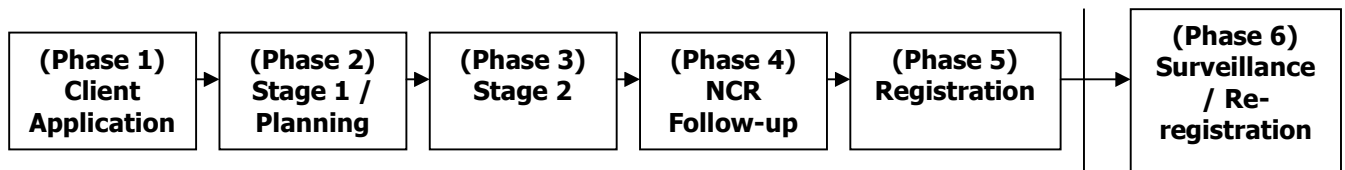
- Is the process identified and appropriately defined?
- Are responsibilities assigned?
- Are the processes implemented and maintained?
- Is the process effective in achieving the desired results?

The collective answers to these and other associated questions will contribute to the evaluation results. Additionally, product quality (as delivered), customer satisfaction, and quality management system effectiveness will be considered as interrelated. This relationship will be reflected in the audit process and associated results.

Required Processes for AS 9100 C

The assessment and registration process to AS 9100 C has been defined below and would be required for all new registrations. Streamlined processes are available for AS 9100 B/C transfers and upgrades from AS 9100 B to AS 9100 C. Please contact our office to discuss your individual needs.

The audit process is defined with the following phases. Required information to support the assessment process is also listed for required process phases:



Phase 1 Client Application

1.1) Client Application:

To properly determine assessment time the following information is required over and above general information such as company, name address, contact information, number of sites, scope, etc.

AS 9101 D, paragraph 4.3.1.1

- the revenue (or percent of revenue - mandatory) for aviation, space, and defense industry, as a proportion of the total revenue;
- the number of employees working for aviation, space, and defense and the total workforce; and
- identification of the major (e.g., top five) aviation, space, and defense customers.

1.2) Client AS 9100 C Declaration:

IAQG Supplemental Rule 001:

- A documented client declaration of conformity to AS 9100 C is required to "kick-off" the process.

Required Processes for AS 9100 C

Phase 2: Stage 1 and Audit Planning

An initial on-site visit or audit is conducted to evaluate the method and degree of implementation of the AQMS. Audit time will vary according to complexity of the AQMS. Documentation and records required include as a minimum:

AS 9101 D, paragraph 4.3.2.2

- quality manual;
- description of processes showing their sequence and interactions, including the identification of any outsourced processes;

NOTE: The processes can be depicted in various ways [e.g., process maps, turtle diagrams, SIPOC method (breakdown of supplier, inputs, process steps/tasks, outputs, customer), octopus].

- performance measures and trends for the previous 12 months;
- evidence that the requirements of the applicable 9100-series standards are addressed by the organization's documented procedures established for the quality management system (e.g., by referencing them in the quality manual or by using a cross reference);
- interactions with support functions on-site or at remote locations/sites;
- evidence of internal audits of processes/procedures, including internal and external quality management system requirements;
- the latest management review results;
- list of all major (e.g., top five) aviation, space, and/or defense and any other customers requiring 9100-series standard compliance, including an indication of how much business each customer represents and their customer specific quality management system requirements, if applicable; and
- evidence of customer satisfaction and complaint summaries, including verification of customer reports, scorecards, and special status or equivalent.

NOTE : Examples of customer specific quality management system requirements are: product process verification, including First Article Inspection (FAI) requirements (e.g., 9102); quality records to be created and maintained by the organization; coordination of document changes; defined special requirements/critical items/key characteristics; approval of design changes by the customer; flow down of requirements to sub-tiers; customer notification of production process changes; traceability; handling of nonconformities; and applicability of other IAQG quality management system standards in contracts (e.g., 9115, 9131).

Continued

Required Processes for AS 9100 C

Phase 2: Stage 1 and Audit Planning (Continued)

During the Stage 1 audit the following will be confirmed:

- number of employees (i.e., full time, part time, contract, temporary) dedicated to aviation, space, and defense;
- number of shifts and shift patterns specific to production and/or maintenance;
- evaluation of multiple site eligibility for determination of audit time and sampling;
- identification of high risk associated with processes and products;
- risk management and associated tools [e.g., Failure Mode and Effect Analysis (FMEA)];
- identification of special processes performed or subcontracted;
- regulatory requirements and authority approvals/recognitions;
- additional requirements on configuration management;
- project/program management;
- continual improvement activities;
- OTD and quality performance measures;
- identification of special requirements/critical items, including key characteristics;
- production process verification [i.e., production readiness, production planning verification, FAI requirements (e.g., 9102)], as invoked in contracts;
- prevention programs [e.g., Foreign Object Debris/Damage (FOD)];
- special work environments [e.g., Electrostatic Discharge Sensitive (ESDS), clean room];
- customer presence at organization [e.g., resident representatives, regular meetings, reason(s) for presence];
- customer satisfaction and complaints status, including customer reports and scorecards;
- any customer specific organization approval statuses, e.g., limited approval, probation, suspension, withdrawal;
- customer restricted areas or proprietary information/confidentiality;
- exclusions from 9100-series standards (exclusions must be limited to clause 7) and supporting justification;
- export limitations/controls [e.g., International Traffic in Arms Regulations (ITAR), Export Administration Regulation (EAR)];
- customer delegated verifications and Materials Review Board (MRB) authority; and
- customer authorized direct ship/direct delivery.

Registrar output: Audit Report (Stage 1), AS 9101 D, Appendix F

Determine: Client readiness for Stage 2, Stage 2 audit planning commences.

Required Processes for AS 9100 C

Phase 3 Stage 2

The purpose of the Stage 2 audit is to assess the organization's degree of conformity with AS 9100 C using the process approach. This phase includes a detailed audit of the organization's implementation of the AQMS in accordance with the documented process methods.

Registrar outputs:	Audit Report, Nonconformity Report (NCR), (See MAJOR / MINOR definitions below) Objective Evidence Record (OER) Process Effectiveness Assessment Report (PEAR) QMS Process Matrix Report	AS 9101 D, Appendix E AS 9101 D, Appendix B AS 9101 D, Appendix A AS 9101 D, Appendix C AS 9101 D, Appendix D
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Determine: AQMS conformity with AS 9100.

NCR MAJOR / MINOR Definitions:

Major Nonconformity

A non-fulfillment of a requirement which is likely to result in the failure of the quality management system or reduce its ability to assure controlled processes or compliant products/services; it can be one or more of the following situations:

- a nonconformity where the effect is judged to be detrimental to the integrity of the product or service;
- the absence of or total breakdown of a system to meet a 9100-series standard requirement, an organization procedure, or customer quality management system requirement;
- any nonconformity that would result in the probable shipment of nonconforming product; and/or
- a condition that could result in the failure or reduce the usability of the product or service and its intended purpose.

Minor Nonconformity

A non-fulfillment of a requirement which is not likely to result in the failure of the quality management system or reduce its ability to assure controlled processes or compliant products/services; it can be either one of the following situations:

- a single system failure or lapse in conformance with a 9100-series standard or customer quality management system requirement; or
- a single system failure or lapse in conformance with a procedure associated to the organization's quality management system.

NOTE: A number of minor nonconformities against one requirement (e.g., similar nonconformities associated to different sites or different departments/functions/processes within a single site) can represent a total breakdown of the system and thus be considered a major nonconformity.

Required Processes for AS 9100 C

Phase 4) NCR and Corrective Action (follow-up)

The following timelines have been established with the following definitions for NCRs raised during the Stage 2 phase:

- 3.1) When the nature of the nonconformity needs immediate containment action, the organization is to determine and report the specific containment actions, including correction within 7 calendar days after the audit and reach agreement with the audit team leader within the next 14 calendar days.
- 3.2) The organization is to analyze and report on the NCR (see Appendix B): the root cause and specific correction and corrective actions taken, or planned to be taken, to eliminate the detected nonconformities within a defined time; and to agree with the organization on corrective action(s) and corrective action plans within a maximum of 30 days from the end of the on-site audit.

Phase 5) Registration

Congratulations!

Phase 6) Surveillance and Re-registration Assessments

Once an AQMS is registered and listed in OASIS, regular ongoing audits are planned and completed using the methods and reports documented above. Scheduling cannot exceed a 12 month interval and Re-registration assessment must be scheduled at least 90 days prior to certificate expiration.